CONSTRUCTION NEWS

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RAILWAYS.

*(*Denotes that this work is advertised in Engineering News.)*

ALABAMA.—See Birmingham, Selma & Pensacola.

BARTLETT-FLORENCE RY.—G. W. Hubbard, Pres., Bartlett, Tex., announces that this company plans extensions both east and west. At present the road has only twelve miles in operation, from Bartlett to Jarrell, Tex., but will soon build east 32 miles to Rockdale and west either to Lampasas or Marble Falls. The total will be 186 miles, valued at $1,250,000. This company has already secured authorization for $430,000 on the first 25 miles of track. G. D. Fairtrace is Ch. Engr., Bartlett. Noted on April 28.

BIRMINGHAM, SELMA & PENSACOLA.—A railroad company will be incorporated by citizens of Centerville, Ala., to cooperate with Selma promoters in the construction of a railway from Selma to Birmingham, Ala., as noted on June 30.

CACHE VALLEY R. R.—This company, which operates a line from Sedgwick to Light, Ark., twelve miles, is reported reorganized, and it is reported that an extension to Paragould, 18 miles, will be made. J. D. Goldman, of St. Louis, is Pres., and G. W. L. Brown is Gen. Mgr. at Sedgwick, Ark.

CANADIAN NORTHERN.—Contract has been awarded for the construction of the line from Virginia, Minn., south to Duluth, 75 miles, to FOLEY, WELCH & STEWART, of St. Paul, Minn. This new line will form part of a through line from Winnipeg to Duluth. Connections with Chicago will be completed within a year. The cost will be $35,000 a mile, a total expenditure of over $2,500,000, it is stated. The right-of-way for the entire distance has been secured. The company contemplates the erection in Duluth of independent terminals at the water front and part of the wharfage is already secured.

The construction of the main line of the Canadian Northern Ry., from Edmonton, Alta., to Yellowhead Pass, will be commenced at once. The contract for the first section, from Edmonton to Pembina River, 70 miles, has been awarded to McMILLAN BROS., of Edmonton.

CANADIAN NORTHERN.—Wm. Mackenzie, Pres., Toronto, Ont., according to the Montreal "Star," has stated that "40 miles of new track will be built west from Sellwood this summer, and it is our present intention to begin building east from Port Arthur early next spring, and keep the work up continuously until through connection is made. The surveying is all done and the territory through which the line will run is rich agricultural country, besides being valuable from a mining standpoint. By the end of summer there will be 70 miles of Canadian Northern track completed towards Port Arthur in a westerly direction from Sudbury."

CANADIAN PACIFIC.—FOLEY, WELCH & STEWART, of St. Paul, Minn., have been awarded contract for grading on the Kootenay Central Ry., from Wardner, B. C., towards Fort Steel, 25 miles.

CARLTON & COAST.—We are officially advised that no construction contracts will be let, as company is building this railway with its own forces. Capital has been secured and right-of-way obtained. This railway will extend from Carlton to Tillamook, 40 miles. Chas. E. Ladd is Pres., Portland, Ore.; W. B. Dennis is Vice-Pres. and Gen. Mgr.; M. L. Johnson is Ch. Engr., Carlton, Ore. Noted on May 12.

CAROLINA, CLINCHFIELD & OHIO.—Mark N. Potter, Chn. Bd. Directors, 24 Broad St., New York, states that company is "going ahead and make Charleston, S. C., our terminal and will begin the construction of a pier at a very early date. We will get into our terminal over the present lines of the Southern and Atlantic Coast Line railways." Ward Crosby is Prin. Asst. Engr., Johnson City, Tenn.

COLORADO & SOUTHERN.—It is officially announced that contract for grading and bridging work has been let to the UTAH CONSTRUCTION CO., Salt Lake City, Utah, for double tracking the line from Minnequa, Colo., to Walsenburg, 46.6 miles. This involves the excavation of 1,250,000 cu. yds. of earth, 370,000 cu. yds. of loose rock, 500,000 cu. yds. of solid rock, also 3,100,000 cu. yds. of borrow, 5,000,000 cu. yds. of overhaul and 50,000 cu. yds. of concrete for bridges and culverts. The rails will be 85-lb. or 90-lb. The total estimated cost of the work is $4,000,000. This improvement is being carried out jointly by the Denver & Rio Grande and the Colorado R. R. Co., a subsidiary of the Colorado & Southern Ry. Co. It is expected that the work will be finished by October, 1911. The construction work is heavy, but not difficult. There will be several concrete culverts and bridges, also several steel bridges. Noted on June 2 and June 16.

DENVER & RIO GRANDE.—See Colorado & Southern.

ELK & LITTLE KANAWHA.—Contract has been awarded to J. J. BOXLEY & SON, of Roanoke, Va., to build its narrow-gage railroad from Gassaway via Frametown to Rosedale, W. Va., 22 miles, to develop timber lands of the Interstate Cooperage Co. Construction is to begin immediately. The line is to be completed by Jan. 1, 1911.

GOTEBO & SOUTHWESTERN.—Final survey is being made from Gotebo to Lawton, Okla. Construction will be started soon. Headquarters, 408 New York Life Bldg., Kansas City, Mo.

STATE LINE & SOUTHERN.—Company has organized and elected officers as follows: Pres., Joseph Wood, Pittsburg; Vice-Pres. and Ch. Engr., Samuel D. Brady, of Parkersburg, W. Va.; Secy., Charles Morris, of Fairmont, W. Va.; General Counsel, W. S. Meredith, Fairmont. The main offices of the company will be at Fairmont, W.Va. This company was organized to construct a line from Rivesville, four miles north to Fairmont, to the state line, there to connect with the Pittsburg & Lake Erie R. R., and is controlled by the Pennsylvania, the Pittsburg & Lake Erie and the Baltimore & Ohio R. R. Companies. The line will be 18 miles long and will open up coal lands. All of the right-of-way has been secured except in several instances; these will be condemned. Noted on June 16.

WASHINGTON-VIRGINIA RY. — Incorporated in Virginia to build a 50-mile railway from Vienna, Fairfax County, to Bluemont, Loudoun County, Va. Capital stock, $1,000,000. Officers: M. E. Church, Pres. and Gen. Mgr.; G. B. Fadsley, Vice-Pres.; F. B. Parker, Secy.; L. L. Northrop, Treas., all of Falls Church, Va.

INDIANA.—An estimate that it would cost approximately $22,000,000 to complete track elevation in Indianapolis, was made by Mayor Shank, of Indianapolis, in an address before the Indiana Municipal League at Richmond, Ind., recently. He said he regarded track elevation, aside from the elevation of sections of tracks in various scattered outlying portions of the city, as the most unsolvable problem of his administration. The estimate was prepared by the city engineering department of Indianapolis, and the figures are by no means definite, being compiled hurriedly in response to a request from the mayor. Before the city can proceed with a definite elevation plan, the mayor said, it would be necessary to have the legislature enact a law permitting the city to spend more annually than it may at present, and to require the railroads to do more than $400,000 worth of work a year, the limit now fixed by existing law.

Mayor Shank said that City Engineer Klausmann estimates that the cost of complete track elevation in Indianapolis would be as follows:

Completing elevation from New York St. to Prospect St., belt tracks, already ordered, $665,000.

Union tracks from Kentucky Ave. to East Washington St., including the cost of changing Pogues run into a sewer, $4,000,000

Completing elevation of Belt tracks around the city, $3,000,000.

Cincinnati division, Big Four, Union to Belt tracks, $3,000,000.

Pennsylvania and C., H. & S. tracks, Union to Belt tracks, $3,000,000.

Big Four and Lake Erie & Western tracks, East Washington St. and Massachusetts Ave., $1,500,000.

Indianapolis division, Big Four, Massachusetts Ave. to Brightwood, $1,500,000.

Lake Erie & Western and the Monon tracks, Massachusetts Ave. to 30th St., $2,000,000.

Peoria & Eastern and the Indianapolis, Decatur & Western tracks, West Washington St. to Tibbs Ave., $1,000,000.

Indianapolis & Vincennes tracks, Kentucky Ave. to Belt tracks, $1,000,000.

Pennsylvania tracks (J., M. & I.), Union tracks to Belt tracks, $1,500,000.

KOOTENAY CENTRAL RY.—See Canadian Pacific.

MANITOULIN & NORTH SHORE (Algoma Central & Hudson Bay Ry.)—Bids will be received until noon, July 23, by R. S. McCormick, Ch. Engr., for the construction to sub-grade of a section of the Manitoulin & North Shore Ry., from the north side of Goat Island Channel, near Little Current, northerly to the White Fish River, a distance of approximately 18 miles. Plans and specifications may be had at the office of the Chief Engineer, Sault Ste. Marie, Ont.

PECOS VALLEY SOUTHERN.—Grading contract has been let to T. H. BRIGANCE, Pecos, Tex., it is officially stated, for building 45 miles. The plans call for a line from Pecos south via Saragosa and Balmorhea to the San Salmon. Track has been laid on 25 miles. There will be one steel bridge over Toyah Creek and two long trestles. W. L. Carwile is Pres., and L. W. Anderson, Ch. Engr., Pecos. Officially noted on March 10, under title of Pecos & Toyah Valley Ry.

PINE BLUFF & NORTHERN.—Walter J. Miller, Pres., Lamar, Mo., advises us that construction contracts will be let about Aug. 15 for building this railway from Pine Bluff, Ark, to Searcy, 80 miles Preliminary survey is made and right-of-way partly obtained. Capital has not definitely been secured. F. C. Kyte is Ch. Engr., Carlisle, Ark. Noted on June 16.

RAILROAD CONCESSION. — A railroad concession in Central America needs capital to the extent of $2,000,000. It is estimated that it will pay 25%; 5,000,000 to 10,000,000 railroad ties can be cut and easily shipped to the United States. The road passes through large bodies of excellent banana lands, then into cabinet woods (mahogany, rosewood and cedar) and pine, ending in gold and iron mines. Particulars can be obtained of the consular officer submitting the report. For details apply to the Bureau of Manufacturers, Dept. of Commerce and Labor, Washington, D. C., referring to file No. 5134.

RAILWAY AND LUMBERING SUPPLIES.—An American Consul in the Far East reports that the local government has just approved a special appropriation of $2,450,000 for the purpose of exploiting certain timber lands. A railway line 25 miles in length is to be constructed. The exploitation of this district should be of commercial concern to the United States, as it offers opportunities for the sale of railway equipment, locomotives, portable tracks, wood-sawing outfits, drag-saw machines, and such apparatus for handling big logs, etc. No bids have yet been asked for by the government, so there is ample time for American exporters to have equal opportunities with other shippers. England and Germany are the chief competitors in all kinds of machinery, active agents of both countries being on the ground. For details apply to the Bureau of Manufacturers, Dept. of Commerce and Labor, Washington, D. C. Refer to file No. 5135.

URUGUAY.—Frederic W. Goding, U. S. Consul at Montevideo, supplies the following railroad news concerning Uruguay: An important decree provides for the extension of the Northeastern Ry. from Melo to Artigas, a town of some importance on the Yaguaron instead of to Centurion. Both towns are on the Brazilian border, the former being accessible to ocean-going vessels. H. A. McIntosh is Engr., Montevideo.

A railway from the port of La Paloma, on the Atlantic, to Treinta y Tres, passing the towns of Rocha and Lascano, and crossing the Cebollati River at its highest navigable point, is to be built, about 127 miles in length. The state guarantees 3½% interest on a cost of about $41,500 per mile, which is to be paid in full when the net profits do not exceed ½% of the capital. Work is to be commenced within six months after the approval of the plans, which are to be submitted eight months after being presented. The railway is to be ready for traffic 45 months after starting. Moles will be constructed at the port of La Paloma and at the crossing of the Cebollati River, although there will be no monopoly. The concession is for 90 years, at the termination of which period the works pass to the State. Colonies will be established, for which a rebate of 20% of the tariff will be allowed on agricultural products, machinery, utensils, and building material. This railway will open up for settlement a vast region now thinly populated and of great agricultural and mineral possibilities. Edwin V. Morgan, American Minister at Montevideo, sends a later report on this proposed railway from La Paloma, giving the name of the concessionaire, which may be obtained from the Bureau of Manufactures, Dept. of Commerce and Labor, Washington, D. C. He also says that the new line will connect with the branch of the Central Uruguay eastern extension to Treinta y Tres, now approaching completion. Mr. Morgan adds: "The Central Uruguay Railway desires to contract with the government to construct a branch line to La Paloma from the town of Minas. The Public Works Commission of the Senate has prepared a bill authorizing this agreement."

ELECTRIC RAILWAYS.

WHITE PLAINS, N. Y.—The New York, Westchester & Boston Ry. Co. has requested authority from the New York State Public Service Commission at Albany, for the exercise of franchises which it holds for a street railroad through Mount Vernon, New Rochelle, North Pelham, White Plains, Eastchester and Scarsdale. As noted on June 2, "the Public Service Commission, Second District, granted on May 28 the application of the New York, Westchester & Boston Railway Co. for permission to abandon that part of its proposed route extending from Westchester Ave., in White Plains, to Elmsford, about three miles. The estimated cost of the Elmsford branch was about $3,000,000. The company decided to abandon the route because it did not think that there would be business enough to justify such a large expenditure."

NEW YORK, N. Y.—On June 8 the Public Service Commission granted a certificate of public convenience and necessity to the Union Railway Co., Frederick W. Whitridge, Receiver, and also approved the terms of the franchise recently granted by the Board of Estimate and Apportionment for the construction of a trolley railroad or extension through Fordham Road from Sedgwick Ave. west to and over the University Heights Bridge and continuing on through 207th St. and Emerson St. to the 207th St. station of the subway at Broadway. This line will be operated in connection with the line recently constructed in Pelham Ave., which carries passengers from Third Ave. to the Zoological Gardens. There will be through cars from the 207th St. station of the subway by way of Fordham Road and Pelham Ave. to Southern Boulevard, in the Bronx.

PITTSBURG, PA.—The promoters of the proposed electric railway between Pittsburg and Wheeling, W. Va., state that engineers will be put to work soon laying out the route, which will be from Pittsburg to West Liberty over the Pittsburg Railway's road. At West Liberty the trunk line will start and go through Bridgeville, Cecil, McDonald, Midway, Burgettstown and Steubenville to Wheeling. W. E. Hildebrand is interested.

CHESTER, PA.—The Chester Traction Co. contemplates improvements to its lines in this city and throughout the county, including double-tracking the road between Darby and Wilmington. Arthur G. Jack, Chester, is Supt.; F. A. Tyson is Ch. Engr., Reading, Pa. Noted on June 9.

ALTOONA, PA.—We are officially advised that the Johnstown & Altoona Ry. Co. will not let contracts until the balance of the right-of-way has been obtained, probably in a few weeks. Following is an estimate of the grading work to be done, noted on June 23: Earth, 167,000 cu. yds.; rock, 156,000 cu. yds.; extra fill, 113,000 cu. yds.; concrete culverts, 1,400 cu. yds.; reinforced-concrete bridge structures, 5,000 cu. yds. Herbert F. Pierce is Ch. Engr., Gallitzin Construction Co., Johnstown. Officially noted on May 5 and May 12.

GRAHAM, VA.—The Graham Electric Ry. Co. has been chartered to build a 2-mile railway between East Graham and West Graham, including a bridge over the Bluestone River. Preliminary surveys are being completed and bids for the franchise will be received soon. James F. Dudley is Pres. Noted on June 23.

FAIRBURN, GA.—The Fairburn & Atlanta Railway & Electric Co. has completed its grading with the exception of one mile from Atlanta to Fairburn, 20 miles. All the work will have been completed within a few weeks, when tracklaying will begin immediately. W. T. Roberts is Pres., and L. W. Roberts, Ch. Engr., at Fairburn, Ga.

FRANKFORT, KY.—The Cincinnati, Lexington & Licking Valley R. R. Co. has been incorporated in Kentucky to build an electric railway through Fayette, Pendleton, Kenton and Campbell Counties, connecting Lexington and Newport. Capital stock, $30,000. Following are the incorporators: Don G. McVean, Covington, Ky.; R. W. Day, Scranton, Pa.; F. L. Fuller, New York; T. J. Foster and W. L. Connell, Scranton, Pa.; R. H. Reese and Wade H. Lain, Cynthiana, Ky.

HENDERSON, KY.—A plan to build an electric railway to connect Uniontown, Smith Mills, Dixon, Corydon, Morganfield and Henderson, Ky., is being promoted by J. P. Porter, it is stated.

FOSTORIA, OHIO.—The Fostoria & Fremont Electric Railway has filed an application with the Seneca County Commissioners asking for a 25-year franchise to build a railway across the public highways. This is part of a plan to build a 21-mile electric railway from Fostoria to Fremont, via Havens, Burgoon, Kansas and Amsden. J. D. McDonel is Secy. Officially noted on Nov. 25 and Dec. 16, '09.

CADIZ, OHIO.—We are advised by A. Evans Townsend, Cadiz, Pres. of the Wheeling, Cadiz & Tuscaramas Traction Co., that a contract for grading the proposed line has been let and work will start immediately. The line will extend from Wheeling, W. Va., through Cadiz to Uhrichsville, Ohio, 60½ miles. Surveys have been made and 90% of the right-of-way secured. J. E. Tiffany is Ch. Engr.

HAMMOND, IND.—The Indiana Northwestern Traction Co., of Monticello, Ind., has been granted a 50-year franchise by the City Council to build a railway in Hammond. This proposed line will connect Cedar Lake, Hammond, Crown Point and Chicago. Eugene Purtelle, 222 La Salle St., Chicago, is Pres.

EVANSVILLE, IND.—A contract has been let to the BURNS CONSTRUCTION CO., of Chicago, Ill., for the construction of the proposed line of the Evansville, Mount Carmel & Olney Electric Ry. Co. The preliminary arrangements have been made for a 65-mile interurban railway to connect Mount Carmel, Highland, Darmstadt, Cynthiana, Owensville, Friendsville, Lancaster, Berryville and Olney.

FORT WAYNE, IND.—With the provision that the Fort Wayne & Winona Traction Co., projected by J. A. Barry, be completed by 1912, the Allen County Commissioners have granted the company a franchise through Allen County. A bond of $2,000 will be given for the completion of the work within the specified time. As noted on June 30, this company "has been organized in Fort Wayne with a capital stock of $100,000. Its directors are J. A. Barry, Edward G. Hoffman, Ernest W. Cook and Gaylord M. Leslie, of Fort Wayne, and Ralph A Barry, of New York. Incorporation papers have been filed. The new interurban line is to parallel the Pennsylvania R. R. between Fort Wayne and Warsaw, a distance of 40 miles in the course of which it will touch Arcola, Coesse, Columbia City, Larwill, Princeton, Wooster and Winona Lake. Estimated cost, $1,000,000. Wm. Fowler, of Wabash, Ind., is Ch. Engr."

GRAND LEDGE, MICH.—We are officially advised that the W. H. ZIMMERMAN CO., First National Bank Bldg., Chicago, Ill., has been awarded contracts for the engineering and construction work in connection with

12½ miles of third-rail interurban railway to be constructed from Lansing to Grand Ledge, Mich. Arrangements will be made to enter Lansing over the tracks of the Michigan United Railways. The new line will carry freight as well as passengers, and ultimately will be extended from Grand Ledge to Grand Rapids. The promotors of the project are J. W. Ewing and J. S. Mudge, of Grand Ledge, and R. E. Olds, of Lansing, Michigan. The legal organization of the company will not be completed until Mr. Olds returns from Europe. The right-of-way has all been purchased, and arrangements have been made by the W. H. Zimmerman Co. to turn over the grading, culverts, bridges and fencing to GEORGE H. KNEAL, of Lansing, Mich., who has started active construction.

EAST ST. LOUIS, ILL.—The Alton & Southern R. R. Co. has been incorporated in Illinois to build an electric railway from the right-of-way of the Southern Ry. Co., in East St. Louis, to the right-of-way of the St. Louis & Belleville Electric Ry. Co., near Louisiana Boulevard. The headquarters will be in East St. Louis. Capital stock, $10,000. The incorporators are: Arthur V. Davis, R. B. Mellon, Pittsburg, Pa.; Charles M. Hall, Niagara Falls, N. Y.; C. B. Fox, Filbert McCulloch, Charles Souder and W. H. Hebenstreit, East St. Louis, Ill.

MILWAUKEE, WIS. — The Milwaukee Western Electric Co. has been organized in Wisconsin, with $200,000 capital, to build 100 miles of electric lines. Surveys have been made from Milwaukee, northwest via Sussex, North Lake, Neosho and Beaver Dam to Foxlake, with a branch from Sussex, south to Waukesha. An extension is eventually to be built north via Markesan to Green Lake after the line is in operation to Foxlake. The company is planning to begin work, and probably will let contracts this Fall. The maximum grade will be 1.3%. There will be about three steel bridges. The general contract has been let to W. D. CHAPMAN, Marquette Bldg., Chicago. V. Zimmerman, Jr., is Pres., and C. A. Chapman, Inc., are Engrs., Chicago.

IOWA CITY, IOWA.—The Iowa City Electric Ry. Co. will start work July 21 on its proposed 4-mile railway in Iowa City. Power will be purchased from the Iowa City Light Co., and it will operate six cars. Capital stock authorized $100,000. Bonds authorized, $60,000. J. O. Schulze is Pres., Gen. Mgr. and Pur. Agent; J. H. Rober, Vice-Pres., and D. A. Reese, Secy. and Treas. Noted on Dec. 9, '09 and June 30, '10.

TEMPLE, TEX.—The Temple Northwest Ry. Co. has secured all rights-of-way between Temple and Gatesville, and it is expected that the entire line between Temple and Hamilton will be ready for track laying Sept. 10. This proposed 100-mile railway will connect Temple and Comanche via Bell, Corvell and Hamilton Counties. As noted on May 5, under Railways, "contracts have been awarded to C. M. McCONNICO and to J. S. MOORE, both of Lufkin, Tex., for grading work from Temple northwest to Hamilton, about 65 miles, according to the Galveston "News." The work is to be started at once. W. J. McDaniel is Pres., and W. E. Dozier is Engr., Temple, Tex."

PORT ORCHARD, WASH.—A 50-year franchise has been granted to the Bainbridge Development Co., of Port Orchard, by the County Commissioners of Kitsap County for the construction of an electric railway on Bainbridge Island, in connection with a ferry service to Seattle. One line will run from Eagle Harbor to Fletcher Bay and Manzanito, and another line connecting Eagle Harbor with Port Blakely and Pleasant Beach. About 28 miles of track will be built. Work will be started within six months. M. B. Jackson, Jr., is Pres.

ALBANY, ORE.—The Southern Oregon Railway & Power Co., Albany, has been incorporated in Oregon to build electric railways, power plants, etc., through the Rogue River Valley and Southern Oregon. Capital stock, $3,000,000. The incorporators are: J. R. Allen, J. Vilas and S. V. Beckwith.

GLENDALE, CAL.—E. D. Goode, Pres. and Gen. Mgr., Glendale & Eagle Rock Ry. Co., Los Angeles, has been granted a franchise to build an extension to the northern city limits of Glendale. Noted on June 9.

MONTEREY, CAL.—The Monterey & Del Monto Heights Electric Ry. Co. has completed the preliminary arrangements and construction has been started on its projected 4-mile railway to connect Monterey and Del Monte Heights. F. M. Fairchild, 1707½ Oak St., San Francisco, is Gen. Mgr. Officially noted on July 1, '09.

QUEENSTON, ONT.—H. H. Collier has applied to the City Council for a franchise for an electric railway in Queenston, for the Niagara & St. Catharines Ry. Co., which is projecting a railway between St. Catharines, Ont., and Niagara-on-the-Lake.

OTTAWA, ONT.—Work on the Ottawa, Rideau Valley & Brockville line is to be started this fall on the proposed line from a point near Ottawa, Ont., south to Brockville, about 60 miles. W. C. MacLaren, J. H. Gilmour, Brockville; E. W. Clarke, D. H. MacLean and G. H. Kidd, Ottawa; A. McDermott and R. E. Elliott, Montreal, Que., are interested.

LIGHT AND POWER PLANTS.

*(*Denotes that this work is advertised in Engineering News.)*

SALEM, MASS.—The Salem Electric Light Co. has awarded contract for extensive improvements to its power plant on Peabody St. to J. N. and V. S. PETERSON.

MILLBURY, MASS.—Plans have been completed by the Worcester Consolidated St. Ry. Co. for the construction of a new power station at Millbury. An extension will be built to the present plant in Millbury, on the Blackstone River, increasing the output from 3,000 HP. to 5,000 HP., which will be transmitted to Worcester. Plans will be carried out as soon as permission is obtained from the New York, New Haven & Hartford R. R. Co. to erect high-tension transmission lines along its right-of-way from Millbury to Worcester.

PROVIDENCE, R. I.—The E. K. WATSON CO., of Warren, R. I., has been awarded contract for the construction of an addition to the electric power station of the Browne & Sharpe machine shops here.

JEWETT CITY, CONN.—The Aspinook Co. is having plans and specifications prepared by Charles T. Main, Engr., Boston, Mass., for extensive additions and improvements to the power plant of their print, dye and bleaching works at Jewett City. These include the installation of two new horizontal return tubular boilers, 78 ins. in diameter with 3½-in. tubes, 20 ft. long, developing 218 HP. each, and a horizontal cross compound belted engine rated at 425 HP., and the revamping of the power piping.

NEW YORK, N. Y.—Bids are asked until 3 p. m., July 14, by the Park Board for furnishing and installing new boilers and other work in connection therewith in the conservatories in Central Park.

We are officially advised that bids were received as follows on July 5 for repairs, alterations and additions to electric equipment in Public Schools (a) 74; (b) 93; (c) 94: T. Frederick Jackson, Inc., 94 John St., New York, (a) $4,598. COWDEN & DE YOUNG, INC., 45 East 42d St., New York, (a) $4,700; (b) $5,186 (awarded contract); (c) $4,839. GRIFFIN & CO., 150 Nassau St., New York, (a) $4,359 (awarded contract); (b) $5,980; (c) $4,239 (awarded contract). Peet & Powers, Inc., 45 West 34th St., New York, (a) $5,181; (b) $6,464; (c) $5,165. New York Construction Co., (a) $5,385; (b) $6,375; (c) $5,280.

NEW YORK, N. Y.—Bids are asked until 11 a. m., July 30, by the Bureau of Yards and Docks, Navy Dept., Washington, D. C., for condensers, piping, equipment, etc., for power plant, navy yard, New York. Specifications are on file at the office of Engineering News, New York.

GERMANTOWN, N. Y.—The Red Hook Light & Power Co., 17 State St., New York, is asking for bids for the construction of a concrete dam of 1,200 cu. yds. near here.

*WEST POINT, N. Y.—We are officially advised that bids were received on July 6 as follows by the Quartermaster, U. S. A., West Point, for furnishing and installing extension of steam distributing system: Walworth Mfg. Co., 134 Federal St., Boston, Mass., $5,000; Thompson-Starrett Co., 51 Wall St., New York, $6,300; English & Flett, Inc., 226 Congress St., Boston, $5,067; J. W. Danforth Co., 70-72 Ellicott St., Buffalo, N. Y., $5,684; Gillis & Geoghegan, 537 West Broadway, New York, $7,600.

SYRACUSE, N. Y.—The Syracuse Lighting Co. will apply to the City Council for permission to erect and maintain ornamental poles for cluster lamps in South Warren St. The cost of maintaining the lamps to be paid by the business men in the section where the lamps are erected. Plans for erecting ornamental lamps on Jefferson St., between Warren and South Salina Sts., are also being considered.

SALEM, N. J.—The City Council has granted the Salem Electric Company a 25-year franchise. The terms of the franchise provide that the company construct a new plant, to be equipped with modern machinery and to be completed within 18 months.

SOUTH BETHLEHEM, PA.—The Bethlehem Steel Co., it is reported has completed plans for a new power plant, to be driven by gas engines. The building will be 100 ft. × 315 ft., and will be equipped with 4-cycle, double-acting units, manufactured by the company, direct-connected to alternating-current generators.

NEW CUMBERLAND, PA.—The Susquehanna Woolen Co., of New Cumberland, which has been using steam as a motive power, will change to electricity. A building will be erected in which a 150-HP. boiler will be installed, attached to an electric generator, which will move the machinery of the mill and also supply illumination.

WASHINGTON, D. C.—The Treasury Department on July 11 awarded contracts for electric light lamps for the government throughout the country to the GENERAL ELECTRIC CO., 30 Church St., New York; COLUMBIA INCANDESCENT CO., and the NOVELTY LAMP CO. Estimated cost, $170,000.

FULTON, VA.—The Richmond & Henrico Ry. Co. awarded contract on June 27 for boilers for its proposed new power plant to be erected on Louisiana St., in Fulton, to the BABCOCK & WILCOX CO., 85 Liberty St., New York. Estimated cost, $10,000.

STAUNTON, VA.—Contract for lighting the streets of the city has been awarded by the Common Council to the STAUNTON LIGHTING CO., at $6,000 per year.

ELKINS, W. VA.—The Elkins Electric Ry. Co. is planning to construct a new power plant soon and also expects to construct seven or eight miles of tracks within the next three months. F. B. Bloomfield, is Gen. Mgr.

GLEN ALPINE, N. C.—A company headed by A. M. Kistler, of Morganton, and J. D. Pitts, of Glen Alpine, is working out plans for the development of a water power on the Catawba River near here. A preliminary survey of the proposed development is now being made and it is estimated that approximately 2,000 HP. of electricity can be produced. The town of Morganton for power and lights would consume between 1,200 and 1,500 HP.

GREENVILLE, S. C.—The City Council has been applied to by J. Thomas Arnold, representing a power company, for a franchise here.

ROCK HILL, S. C.—The Board of Public Works has engaged Benjamin Parks Rucker, of Charlotte, N. C., Consulting Engr., to prepare plans and specifications for a municipal electrical light plant. The city has voted to issue $285,000 of bonds, $35,000 to be used for a municipal electric plant. John T. Roddey is Mayor.

CHARLESTON, S. C.—The NEWPORT CONTRACTING & ENGINEERING CO., of Newport News, Va., has been awarded contract for piping, conduit and heaters in the navy yard power plant here. Bids were opened on June 11. List of bidders noted on June 16.

COLUMBUS, GA.—Contract for the construction of the Meritas Mills has been awarded to T. C. THOMPSON & BRO., of Birmingham, Ala., and Charlotte, N. C., including the erection of mill building, weave shed, power-house, seven warehouses and village. The equipment will include 10,000 spindles and 170 looms, which will be equipped for electrical operation. Alvin Hunsicker, 320 Broadway, New York, is Pres.; Fred. S. Hinds, 19 Milk St., Boston, Mass., is Arch. and Engr.

ANNISTON, ALA.—The City Council has awarded contract for lighting the streets of the city to the ANNISTON ELECTRIC & GAS CO. for a period of ten years. The city is to have the privilege of purchasing the plant at every 5-year period under terms of contract.

GADSDEN, ALA.—The City Council has granted to R. H. Cobb, of Gadsden, promoter of the Coosa River Power Co., a franchise to furnish electricity here. Noted on June 9.

WHITE CASTLE, LA.—The City Council has granted the Dunlap Electric Light Co., of Plaquemine, La., a franchise to furnish electricity for lamps here. The company will also supply electrical service in Turnerville, a suburb of Plaquemine, and in Addis, La.

SHREVEPORT, LA.—The Arkansas Gas Co. has filed a mortgage for $5,000,000 here in favor of the Colonial Trust Co., of Pittsburg, Pa., to finance the construction of a system of gas pipe lines that it will build from the natural gas field near here to Little Rock and Hot Springs, Ark. The company contemplates building a line to St. Louis, Mo.

ISLAND, KY.—Contracts have been awarded to the CHARLESTON ELECTRICAL SUPPLY CO., of Charleston, W. Va., by the Memphis Mining Co., of Memphis, Tenn., for equipment for its power plant here, including an engine built by the Ridgway Dynamo & Engine Co., of Ridgway, Pa., connected to a 300-KW. direct-current generator, with switchboard and auxiliary apparatus. The plant will furnish electricity for operating the machinery in the mines, for hauling, surface work and for lamps.

*CLEVELAND, OHIO.—The County Building Commissioners on June 29 received bids for the power plant for the new courthouse. Bids for furnishing heat, light and power for a period of six years were also submitted. Forty-three bids were submitted, forty of which were for power-house and equipment. Only one complete bid was submitted in this class, by John Grant & Son, at $357,000 for the plant, with $95,000 additional if a tunnel is constructed. For the building alone $147,500 was asked. All the other bids were for parts of the equipment. The lowest bid for furnishing heat, light and power was submitted by the Cleveland Electric Illuminating Co., which bid was 3¾ cts. per KW. for light, 4¾ cts. per KW. for power and 35 cts. per 1,000 lbs. pressure for steam heating purposes. The Strong, Carlisle & Hammond Co. bid 4 cts. each for light and power and 40 cts. for steam. The Cleveland Light & Power Co. bid 5 cts. for light, 4¾ cts. for power and 35 cts. for steam. All bids were submitted to a committee for tabulation.

DANVILLE, IND.—The Danville Light, Heat & Power Co. is planning to extend its service to the towns of Coatsville, Clayton, Mooresville and other towns to furnish electricity for street and commercial lighting and to furnish electrical service to farmers along the line. The company now supplies energy in Danville, Plainfield and Brownsburg and farmers along its lines between those cities. James F. Lynch, Mgr., has secured a franchise to construct and operate an electric light and power plant in Shoals, work on which will commence soon.

BRAZIL, IND.—Bids are asked until 11 a. m., August 8, by the Board of County Commissioners for the construction of plumbing, heating and electric plant for new County Infirmary.

SYRACUSE, IND.—WILCUTTS & HOOVER, of Marion, Ind., have been awarded contract to build a concrete hydraulic dam across Elkhart River for the Syracuse Cement Co. Power and light will be generated.

IRONWOOD, MICH.—The City Council has awarded to the ASHLAND POWER CO. franchise for an electric light, heat and power plant here and contract for street lighting.

MARSEILLES, ILL.—The Marseilles Hydraulic Co., of Ottawa, Ill., lately incorporated, is contemplating the construction of a hydroelectric power plant on the south side of the Illinois River here, where it has secured a 99-year lease. Work on construction of the plant will probably begin about Sept. 1. Duncan McDougal is Pres.

ROCKFORD, ILL.—THE NEWTON ENGINEERING CO., of Milwaukee, Wis., has been awarded contract for a concrete dam to replace the old water-power dam here, at about $30,000. The structure will be about 535 ft. long.

KENOSHA, WIS.—The Kenosha Electric Ry. Co. is planning to erect a new power plant here. It has made a proposition to the city for a 99-year lease of two lots adjoining the pumping station of the Kenosha Water Co. The present site must be vacated by Nov. 1.

CALMAR, IOWA.—C. Miller & Sons, of Clermont, Iowa, have applied for a franchise to construct and operate an electric light plant.

STRAWBERRY POINT, IOWA.—Bids will be received by A. R. Cole, Village Clk., until 4 p. m., July 19, for the construction of a new electric light plant here, according to the plans of O. Claussen, National German-American Bank Bldg., St. Paul, Minn.

OSSIAN, IOWA.—C. Miller & Son, of Clermont, Iowa, it is reported, have been granted a franchise to construct and operate an electric light and power plant here.

CROSBY, MINN.—A franchise has been granted to H. F. Pearce and others for the construction and operation of an electric plant and water-works here. Work, it is expected, will commence on the building of the plants at once. The plant will furnish electricity in the towns of Deerwood and Cuyana, Minn.

WHEATLAND, WYO.—See item under Water Supply-Irrigation.

ST. LOUIS, MO.—James Knox Taylor, Supervising Arch., Treasury Dept., Washington, D. C., has awarded contract for the installation of electric conduit system at the St. Louis post-office to F. E. NEWBURY ELECTRIC CO., of St. Louis, Mo., at $15,588.

MONTENE, ARK.—The Clubhouse, Hotel & Cottage Co. is preparing plans for the installing of an electric light plant.

OLA, ARK.—The City Council is considering the installation of an electric light plant to be owned by the municipality, or operated under a franchise granted by the city. M. L. Martin is Mayor.

MISSION, TEX.—The Minneapolis Steel Co., of Minneapolis, Minn., has submitted a proposition to the City Council to install an electric light and ice plant here. Estimated cost, $13,000.

NACOGDOCHES, TEX.—The City Council has instructed the Fire Committee to secure estimates of the cost of installing an electric light plant in connection with the water-works system here.

TAYLOR, TEX.—On June 28 the City Council granted a franchise to R. E. Schurtz to build and operate a gas plant here.

ELLENSBURG, WASH.—The City Council has granted A. Olson, C. O. Eidel, A. F. Currier and F. Wippel a franchise to supply electricity here for lamps and motors.

NEWPORT, WASH.—The Northern Idaho & Montana Power Co. has awarded contract to the WASHINGTON POWER CO., of Spokane, Wash., to provide electricity for lamps and motors for the cities of Sandpoint, Newport and intervening points for a period of ten years. The Washington Power Co. will erect a high-tension transmission line from its power plant at Little Falls, on the Spokane River, to Newport, Wash., 70 miles in length. The Northern Idaho & Montana Power Co. controls and operates electric light and power plants between Kalispel, Mont., and Newport, Wash.

SALEM, WASH.—The Salem Electric Co. is contemplating improvements to cost about $200,000. It is proposed to build an addition to its plant and install new generating machinery and also improvements to its distributing system here. It will also build a conduit system to cost $100,000. The company is also planning to improve its plant on Peabody St. at a cost of $75,000.

REDMOND, ORE.—The Crook County Water, Light & Power Co. is contemplating the purchase of two 750-KW., 3-phase generators, to be installed within six months. H. F. Jones is Secy. and Treas.

LOS ANGELES, CAL.—The lighting system in Central Park will be improved by the installation of ornamental electroliers, 72 to be erected.

MARICOPA, CAL.—Preparations are being made to enlarge the plant of the West Side Electric Co., of Maricopa, for extending its system to adjacent oil fields and also to the towns of Taft and Moron. The plant will furnish a 24-hour service covering a territory of about ten miles square. H. G. Shippe is Pres. and Gen. Mgr.

LOS ANGELES, CAL.—The BAKER IRON WORKS, Los Angeles, has secured contract for the erection of boiler room steel work in the new plant of the Pacific Light & Power Co., at Redondo Beach, at $21,919.

LEWISTON, IDAHO.—Surveys are being made by the Lewiston-Clarkston Improvement Co. on the Grand Ronde River in connection with the construction of a large power plant. The company has acquired a location for power site and all necessary holdings for same.

TORONTO, ONT.—WATSON, JACK & CO., of Montreal, Que., have recently been awarded contract by the Hydroelectric Power Commission of Ontario for both the suspension type and strain type high tension insulator.

BRIDGES.

*(*Denotes that this work is advertised in Engineering News.)*

BOSTON, MASS.—William Jackson, City Engr., has completed plans for the location and construction of the proposed temporary bridge over the Mystic River, between Chelsea and Charleston and they have been filed with Col. Frederick V. Abbott, U. S. Engr., Boston, Mass. Plans for the structure call for a pile bridge with a 100-ft. draw 25 ft. above mean water. The draw in the present Charlestown-Chelsea bridge will be taken out and the foundation removed, so that a clear opening can be secured for the passage of vessels. The fender pier will also be extended about 200 ft. up the Mystic River.

NEW YORK, N. Y.—Bids are asked until 2 p. m., July 21, by Kingsley L. Martin, Comr. of Bridges, for completing the new Pelham Bridge over Eastchester Bay, in Pelham Bay Park, Boro. of the Bronx.

*OSWEGO, N. Y.—Bids will be received by Saml. Hunt, Chn. County Bridge Com., at the office of the Department of Public Works until 2 p. m., Aug. 2, for the construction of a joint city and county bridge across Oswego River, at Bridge St. John Smith is Comr. Pub. Wks.

*LITTLE FALLS, N. Y.—Bids will be received by the Town Superintendents of the towns of Manheim, Herkimer County, and town of St. Johnsville, Montgomery County, at the Common Council Chambers at Little Falls, until noon, July 26, for the construction of a concrete-steel arch bridge over East Canada Creek, between Herkimer and Montgomery Counties at East Creek, N. Y., consisting of three arches, each having a clear span of 80 ft. and a clear width of 20 ft. between railings. Plans and specifications are now on file in the office of County Superintendent of Highways of Montgomery, Fort Plains, N. Y., who also has extra plans for bidders, and can be seen at the Town Clerk's office of the town of Manheim, at Dolgeville, N. Y., and the Town Clerk's office of the town of St. Johnsville, at St. Johnsville, N. Y. Charles B. Heller is Town Supt., Manheim. Norman Dillenbeck is Supt., St. Johnsville.

PHILADELPHIA, PA.—Bids are asked until noon, July 20, by the Department of Public Works, for Schedule D, construction of a substructure of seven track railroad bridge over [illegible] St., under Connecting Ry., consisting of concrete abutments and columns and grading and paving the street.

EASTON, PA.—Bids are asked until 10 a. m., July 15, by the Northhampton County Commissioners, Easton, for the construction of two reinforced concrete highway bridges.

*HUMMELSTOWN, PA.—We are officially advised that bids were received on July 12 by the Board of Commissioners of Public Grounds and Buildings of the Commonwealth of Pennsylvania, at Harrisburg, for furnishing all labor and material necessary in the construction of a 5-span non-reinforced concrete arch bridge over Swatara Creek, near Hummelstown, Dauphin County. The length of the bridge over all will be 311 ft.; the width of roadway 20 ft. paved with brick. Samuel B. Rambo is Supt. The bids follow: Nelson Meryditch Construction Co., Chambersburg, Pa., $17,992; for extra concrete in foundations, cost plus 10%. FERRO-CONCRETE CO., Harrisburg, Pa., $17,495; for extra concrete, $10 per cu. yd. or cost plus 10% (awarded contract).

BALTIMORE, MD.—Bids are asked by the Board of Awards until 11 a. m., July 20, for furnishing all the material and labor and equipment, and all the necessary work to construct the substructure and superstructure of Poplar Grove St. bridge, in accordance with the specifications and plans on file in the office of the Commissioners for Opening Streets.

CEDARTOWN, GA.—All bids opened on June 20 by the Board of County Commissioners, for the construction of three concrete arch bridges, have been rejected. J. L. Moore, Rockmart, Ga., is Chn. Bd.

NEW IBERIA, LA.—The Iberia, St. Mary & Eastern R. R. Co., D. A. Genung, Ch. Engr., New Iberia, will erect two 150-ft. span drawbridges over Bayou Teche.

NEW ORLEANS, LA.—MUIR & FROMHERZ, 211 Camp St., have secured contract, it is stated, for constructing a bridge over Orleans Canal at Alexander St., at $8,352.

LOUISVILLE, KY.—The Louisville & Jeffersonville Bridge Co. will, it is reported, soon award contract for the construction of the proposed viaduct. Estimated cost, $200,000. The company is controlled by the Cleveland, Cincinnati, Chicago & St. Louis Ry. Co., and Chesapeake & Ohio Ry. Co. Contract will be let at the office of George P. Smith, Ch. Engr., Cleveland, Cincinnati, Chicago & St. Louis Ry., Cincinnati, Ohio.

SYLVANIA, OHIO.—Bids will be received until Aug. 2 by the Board of County Commissioners, Toledo, for the substructure and superstructure of bridge on Division St. over Ten-Mile Creek. Bidders may submit their own plans. Charles J. Sanzenbacher is County Audr.

ROCHESTER, OHIO.—Bids will be received until July 19 by the Board of County Commissioners, Elyria, Charles Chandler, Clk., for constructing a steel bridge in Huntington Township, one-half mile south, 2½ miles east of Rochester station, known as Farnsworth bridge. C. H. Lawrence is County Surv., Elyria.

WARREN, OHIO.—Bids are asked by the Trumbull County Commissioners, Warren, until 1 p. m., Aug. 1, for all labor and material for the construction of the superstructure of a bridge over Grand River, Mesopotamia Township, near Comb's farm; also for the superstructure of a bridge over Mosquito Creek, Greene Township. Fred. T. Stone is County Audr.

MARION, IND.—Bids are asked by the Board of Commissioners of Marion County until 10 a. m., July 18, for constructing extension to culvert on Three Notch road, 300 ft. north of the southwest corner of Section 24-15-3 in Centre Township. Albert Sahm is County Audr.

BRAZIL, IND.—The Commissioners of Clay County will receive bids until 11.30 a. m., Aug. 2, for the construction of a steel bridge with concrete abutments. J. L. Burnes is County Audr.

FOWLER, IND.—Bids will be received by the Commissioners of Benton County until 1 p. m., July 28, for the construction of a steel bridge in the town of Chase. Lemuel Shipman is County Audr.

BLUFFTON, IND.—O. D. Garrett, Audr. of Wells County, is asking for bids until 2 p. m., Aug. 1, for the construction of a double 40-ft. span reinforced-concrete arch.

GREENBURG, IND.—The Commissioners of Decatur County have let a contract for the construction of the Shiloh bridge to ALBERT FISHER.

BAY CITY, MICH.—Bids will be received at the office of the Bay County Bridge Commission, John H. Blomshield, Engr., Shearer Block, until July 20 for making repairs to Third St. bridge.

MENOMINEE, MICH.—Congress has passed the bill authorizing the construction by the cities of Menominee and Marinette, Wis., of a bridge over the Menominee River, between the two cities.

MONTICELLO, ILL.—The County Board has awarded contract for constructing a 2-span bridge, 200 ft. long, over Sangamon River, in Sangamon Township, to D. BALL & SON, of Bement, at $6,950.

MARION, IOWA.—Alan McDuff, County Superv., has advised the construction of a new bridge over the stream at Bever Ave., Cedar Rapids, beyond the limits of the Park. The new structure will be of concrete and steel and will accommodate all kinds of traffic, including automobiles.

SIOUX CITY, IOWA.—The City Council has decided that all pile bridges over Perry Creek, below West Third St., must be taken out and replaced with permanent structures. The Chicago, Milwaukee & St. Paul Ry. and the Chicago & Northwestern R. R. and the Combination Bridge Co. will bear the expense. Estimated cost, about $60,000.

CHARITON, IOWA.—The Board of Lucas County Supervisors are issuing bonds for $20,000 for the construction of bridges.

FORT DODGE, IOWA.—Bids will be received by W L. Tang, City Clk., until Aug. 22 for taking down old superstructure on Farley St., across Des Moines River, and furnishing material and erecting new steel superstructure 330 ft. long and steel viaduct 323 ft. long. S. J. Bennett is Mayor.

PIPESTONE, MINN.—All bids received by the committee in charge of awarding contracts for the construction of three steel bridges in Holland and one at Lake Lillian have been rejected as excessive. New bids will be asked.

HASTINGS, MINN.—Bids are asked until 10 a. m., July 26, by F. A. Hoffman, County Audr., for the construction of an approach to the Cedar Ave. bridge, located over the Minnesota River in Dakota County.

WILLSTON, N. DAK.—Bids are asked until 10 a. m., July 20, by the Board of County Commissioners, for the construction of six county bridges. E. M. Atterberry is Audr., Williams County.

GREAT FALLS, MONT.—Bids are asked until 2 p. m., July 16, by the Cascade County Commissioners for the construction of 18 I-beam steel bridges from 15 to 30 ft. in length. David M. Wood is Clk.

INDEPENDENCE, MO.—Bids will be received until July 20 at the office of the County Clerk at Independence for constructing a 36-ft. steel bridge, one-half mile southwest of Buckner; also two steel bridges, 30 × 16 ft., one to be constructed 2½ miles northeast of Lone Jack and the other near Makin Bros.; also bids for abutments for above bridges. Rowland T. Procter is County Surv. and Highway Engr.

OAK CLIFF, TEX.—Contract for constructing a concrete bridge over Cedar Creek at Forest Park has been awarded to the STANDARD ENGINEERING & CONSTRUCTION CO., at $11,300.

SAN ANTONIO, TEX.—The following bids were opened on June 25 by the City Council Finance Committee for constructing a bridge over San Antonio River at Travis St.: Pennsylvania Bridge Co., Steelton, Pa., $13,893; Aiken Cement House Co., of San Antonio, $14,517; Leversedge Bridge Co., of Ft. Worth, $16,000; El Paso Bridge Co., of El Paso, $16,130; T. H. Allsbury & Co., of Houston, $18,750; Webber-Duller Co., of Houston, $18,945; H. B. Thompson Co., of San Antonio, $19,000; Missouri Valley Bridge Co., of Dallas, $21,975; Austin Bros., of San Antonio, $25,598.

GOLIAD, TEX.—The Goliad County Commissioners will probably open bids on Aug. 10 for the construction of a county line bridge. Plans and specifications may be seen at the clerk's offices at Goliad and Cuero, Tex. Estimated cost, $7,500.

HOUSTON, TEX.—Harris County will receive bids for the construction of a bridge across Sims Bayou until July 15. John B. Ashe is County Audr.

FAIRFIELD, CAL.—The County Board of Supervisors of Solano County will receive bids until July 18 for the construction of a reinforced concrete and steel bridge across the Suisun Creek, near Thomasson. Plans on file at the office of County Engineer, Fairfield.

STOCKTON, CAL.—The County on June 27 awarded the contract for the construction of a bridge across Mormon channel at Stanislaus St., to DENNIS TUMELTY, at $4,594.

LOS ANGELES, CAL.—The Pacific Electric R. R. Co. has awarded contract to the WEBER-DULLER CO., Pacific Electric Bldg., for the construction of a reinforced-concrete bridge 396 ft. in length and 32 ft. wide, over the Los Angeles Ry. Co.'s tracks at Cornwell St., at $4.90 per cu. yd. for concrete in place in piers, abutments, walls and footings; 3.55 cts. per lb. for steel reinforcing rods in place in north abutment, walls and footings; 50 cts. per cu. yd. for excavations, including back filling and $4,385 for balance of bridge, including painting but not paving, Sherwin-Williams or equal paint.

BUILDINGS.

(*Denotes that this work is advertised in Engineering News.)*

NEW YORK, N. Y.—The Charles F. Noyes Co., 92 William St., has negotiated a lease for the Trinity Church Corporation, which will erect a 6-story building for the Diamond Match Co., 111 Broadway, on the plot 39 and 41 Clarkson St., 50 × 100 ft. The lease is for a long term of years. The premises will be used as the distributing point for New York.

Plans have been filed by William A. Boring, Arch., 32 Broadway, for a 12-story fireproof apartment house, to be erected at the northwest corner of Park Ave. and 60th St., for the 520 Park Avenue Co., of which Lyman B. Kendall is Pres. The facade will be classic in design, of brick, with limestone trimmings, and a granite base, with a porticoed entrance ornamented with two massive Doric columns of limestone and four Doric columns of polished granite in the loggia of the entrance. The foundation of the building will be built on concrete columns sunk to a depth of 45 ft. for a rock foundation. The building will have a frontage of 90.5 ft. on Park Ave., where the main entrance will be located, and 59.10½ ft. on the street. There will be a foyer hall entrance to each apartment, of which there will be eleven, one a duplex. The cost of the building is estimated at $350,000.

The A. Feldmann Construction Co., 43 East 20th St., has bought from Max Marx the plot 102.2 × 173.10 ft., at the north corner of Riverside Drive and 149th St., on which the firm will erect an elevator apartment house as soon as plans are drawn.

The Metropolitan Life Insurance Co. has loaned to the No. 1 Lexington Ave. Co., a corporation, $400,000, on the property situated at the northeast corner of Lexington Ave. and 21st St., where the company is to build a 12-story co-operative apartment house, to be ready for occupancy by Sept. 1, 1911.

Plans have been filed by C. H. Caldwell, Arch., 160 Fifth Ave., for a 12-story fireproof loft building to be erected on the north side of 40th St., 120 ft. west of Madison Ave., for Micheal Friedman, at a cost of $250,000. The building will have a facade of brick with trimmings of limestone and terra cotta and have a frontage of 51 ft. and a depth of 197½ ft.

NEW YORK, N. Y.—The Damascus Amusement Co., R. G. Knowles, Pres., has filed plans for a 3-story brick theater, to be built on the north side of Longwood Ave., 167 ft. east of Westchester Ave. The building will front 76 ft., with a depth of 88 ft., and will cost $100,000. Klein & McElfatrick, 1402 Broadway, are Archs.

Plans have been filed for a 12-story fireproof loft building to be built on the north side of 38th St., 87 ft. west of Seventh Ave., to take the place of six 5-story old-fashioned dwellings. The new building will have a frontage of 120 ft. and a depth of 90 ft., and will be located opposite the Hotel Navarre. The facade will be of limestone, granite and faced brick. The P. J. Carlin Construction Co., P. J. Carlin, Pres., 16 East 23d St., is the owner; Frank J. Helme is Arch. Cost, $360,000.

John W. Alexander, Pres. of the National Academy of Design, made an announcement recently that the Academy plans to erect a monumental fine arts building.

NEW YORK, N. Y.—Bids are asked until 2.30 p. m., July 25, by Michael J. Drummond, Comr. of Public Charities, for providing all labor and materials required for the interior furnishing, cold storage, fixtures and all other work for the entire completion (except laboratory and the like apparatus) of a morgue for the Metropolitan Hospital District, Blackwells Island; for the interior finishing, fixtures and all other work for the entire completion of a staff house for the Metropolitan Hospital District, Blackwells Island; for the interior finishing and fixtures for the entire completion of a dormitory for male inmates, a dormitory for female inmates and a pavilion for the insane at the New York City Farm Colony, Boro. of Richmond.

Bids are asked until 3 p. m., July 25, by C. B. J. Snyder, Supt. of School Bldgs., Dept. of Education, for the general construction, etc., of New Public School No. 165, on Lott and Hopkinson Aves. and Amboy St., Boro. of Brooklyn; for furnishing and erecting three portable school houses on the premises of Public School No. 8, Mosholu Parkway, Briggs and Bainbridge Aves., Bedford Park, Boro. of the Bronx; for installing heating and ventilating apparatus, and installing temperature regulation in new Public School No. 44, on southwest corner of Prospect Ave. and 176th St., Boro. of the Bronx; for repairs, alterations and additions to electric equipment in Public School No. 103, Madison Ave. and 119th St., Boro. of Manhattan; for installing electric equipment in the addition to and alteration in Public School No. 58, on the southerly side of Grafton Ave., between Walker Ave. and Clinton Pl., Woodhaven, Boro. of Queens; for installing heating and ventilating apparatus, and installing temperature regulation in old and new buildings of Public School No. 58, on southerly side of Grafton Ave., between Walker Ave. and Clinton Pl., Woodhaven, Boro. of Queens.

We are officially advised that the contract for constructing a nurses' home, 153.6 × 43.8 ft., at the Roosevelt Hospital, has been let to ROSSELL & PFEFFER, 1 Madison Ave., New York, at $97,558. The building will be fireproof, of brick, terra cotta and cement construction and will cost, complete, $120,000. R. H. Robertson & Son, 160 Fifth Ave., are Archs.

ALBANY, N. Y.—Bids are asked by the State Commission in Lunacy until 3 p. m., July 27, for the following work: (1) For Central Islip State Hospital, Central Islip, N. Y., a kitchen and dining-room building, conduits, steam mains, feeder cables, and outside sewer and water connections for new group, additional boiler capacity, North Colony, including construction, heating, plumbing and electric work; (2) For Kings Park State Hospital, Kings Park (L. I.), N. Y., kitchen and dining-room building, conduits, steam mains, feeder cables, sewer and water connections for new groups, including construction, heating, plumbing and electric work; (3) For Manhattan State Hospital Ward's Island, New York City, kitchen building, steam mains and feeder cables for new cottages, including construction, heating, plumbing and electric work. T. E. McGarr is Secy. of Comn.; F. B. Ware is State Arch., Albany.

BUFFALO, N. Y.—Green & Wicks, Archs., 110 Franklin St., have completed plans for a 100-room addition, 45 × 95 ft., to the German Deaconess Hospital, Kingsley St., near Fillmore Ave. The building will have four stories and basement, fireproof construction, brick and structural iron. Cost, $115,000. Rev. Thomas Munzert, 86 High St., is Pres.

Lansing & Beierl, 371 Pearl St., have plans in preparation for the Canisius College buildings to be erected at Main and Jefferson Sts., to cost about $500,000. The main building will be 200 × 311 ft., three stories high, of brick, stone, terra cotta and structural iron. Rev. Augustine Miller is Pres., 851 Washington St.

LOCKPORT, N. Y.—The Board of Supervisors has decided to erect a tuberculosis hospital for the County of Niagara, to cost $40,000. The site has not yet been selected.

FRAZER, PA.—The contract for the proposed refectory and kitchen building for the Academy of the Immaculate Heart, at Frazer, has been awarded to EDWARD ATKINS, of Philadelphia, Pa. The buildings, which were designed by Ballinger & Perrot, 1211 Arch St., Philadelphia, will be located west of the main building now under construction, and will be connected with it by a 3-story enclosed passageway, 12 ft. wide and 50 ft. long. They will cost about $100,000. The refectory will be three stories with a basement, 96 × 134 ft., surmounted by a dome, 119 ft. high. Beside the refectory it will contain a gymnasium, chapel and dormitories. The kitchen building, which will adjoin it, will be two stories high, 68 × 96 ft. in dimensions. Both buildings will be of Port Deposit granite with terra cotta trimmings. The floors, columns and roof will be reinforced concrete, making the structure practically fireproof.

PHILADELPHIA, PA.—Barber, Hartman & Co. have sold the properties on the west side of Twelfth St., between Race and Spring Sts., for Benjamin Alexander to the Leo Niessen Co. The lot, which measures 100 ft. on Twelfth St. and 58 ft. on Race and Spring Sts., is now occupied by several old stores and dwellings. The purchaser, a wholesale florist concern at 1209 Arch St., has commissioned Ballinger & Perrot, Archs., 1211 Arch St., to plan a 6 or 7-story commercial building to be erected on the site at a cost of $70,000. Upon its completion the business of the owner will be removed to that location.

PLAINS, PA.—A high school is being planned for Plains Township. The proposed structure will contain 13 or 14 school rooms, five class rooms, an auditorium, a chemical and physical laboratory, boys' and girls' play rooms, together with a suite of offices for the supervising principal and the school directors. The cost of the building will approximate $75,000 or $80,000. It will be erected on the site occupied by the present school. The contract will be let at once.

PITTSBURG, PA.—The Hostetter lot at Liberty Ave. and Short St. probably will be improved next fall with a 10-story warehouse. Plans of the building have been drawn and estimates on its construction obtained, and it is said the structure can be erected for about $150,000. It will be of reinforced concrete and is so planned that the floors can be divided quickly to suit the requirements of tenants. The Hostetter Co. is located at 59 Water St., Pittsburg.

WASHINGTON, D. C.—The Supervising Architect of the Treasury, Washington, has rejected all bids recently received for the construction of post-offices at Clinton, Mo.; Newark, Ohio; Plattsmouth, Neb., and Austin, Minn., as being in excess of the amount available.

Plans have been completed by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, for the proposed building for the Bureau of Engraving and Printing at Washington, which is to cost $1,750,000. The plans have been examined by the Commission of Fine Arts created by Congress, of which D. H. Burnham, Arch., Railway Exchange, Chicago, is the head. The building is to be 850 ft. long, four stories in height, classic in style of architecture and is to be constructed on the site of the present building, which will be absorbed as the work progresses.

CHARLOTTESVILLE, VA.—The Chesapeake & Ohio Ry. Co. will build a freight depot at Charlottesville, Va. It will be constructed of brick and stone and will be 300 × 50 ft. Work on the structure will begin, it is reported, at once. It is hoped to have it completed by fall. The office building of the depot will contain eight rooms. I. Garrison, of Richmond, Va., is Superv. of Bridges and Buildings.

RICHMOND, VA.—Plans have been filed in the office of the Building Inspector for the proposed 13-story and basement steel structure to be erected by the Richmond Building Corporation on the north side of Main St., between Eleventh and Twelfth Sts., adjoining the First National Bank. The plans have been prepared by W. Duncan Lee, Arch., of this city, in consultation with Clinton & Russell, 32 Nassau St., New York, Archs. JOHN T. WILSON is the general contractor, and the estimated cost of the building is $225,000. Permission has been given for clearing the site and beginning the excavation, and some time will be taken in checking the detailed plans. The building will front 52.3 ft. on Main St., and run back 90 ft. Its roof will be 165 ft. above the curb line.

PIEDMONT, W. VA.—The contract for the erection of the clubhouse for the West Virginia Pulp & Paper Mills, at Piedmont, has been awarded to A. KNELL, JR. It will be of steel and concrete construction and will measure 44 × 95 ft. The basement will contain lockers, shower baths, kitchen and bowling alleys, while on the second floor will be a reading-room, smoking, billiard and card rooms. It will cost about $40,000. Haskell & Barnes are Archs.

MORGANTOWN, W. VA.—The contract for the construction of the 4-story brick block to be erected by Dr. I. C. White on his High St. property near the intersection of Willey St., has been awarded to the SMITH CONSTRUCTION CO. Cost, $41,000.

FORT SCREVEN, GA.—Bids are asked by the Construction Q. M., Fort Screven, until 11 a. m., July 28, for construction and plumbing of one double set of N. C. O.'s quarters.

JACKSON, MISS.—It is announced from New Orleans that the Great Northern, the New Orleans & Northeastern, and the Gulf & Ship Island soon will begin the erection of a $250,000 union station on the Great Northern right-of-way near the old capitol. These roads now use the Illinois Central station,

which is one mile from the new site. A. H. Hogeland, St. Paul, Minn., is Ch. Engr., Great Northern.

NEW ORLEANS, LA.—We are officially advised that the city of New Orleans intends to build an art museum to cost from $125,000 and $150,000, and architects were invited to submit plans until July 1 at the office of P. A. Lelong, 518 Iberville St., New Orleans. Lebenbaum & Mark, 5009 Lake Ave., Chicago, were the successful architects. The plans call for a 2-story building, of Bedford stone and terra cotta. Bids will be received between Sept. 1 and Sept. 15.

NEWARK, OHIO.—See under Washington, D. C.

WILBERFORCE, OHIO.—We are officially advised that the contract for the construction of the girls' dormitory at Wilberforce University has been awarded to A. G. SPAHR, of Xenia, Ohio. Noted on June 16.

YOUNGSTOWN, OHIO.—Albert Kahn and E. Wilby, Trussed Concrete Bldg., have let the following contracts on the proposed banking and office building for the Mahoning National Bank, of Youngstown, Ohio. The building is to be ten stories high, 50 × 80 ft.: Masonry to NEDERMEYER and RESTLE; carpentry to FRED. HOPLOCK; electric work to ELECTRIC WIRING CO., all of Youngstown.

COLUMBUS, OHIO.—Richards, McCarty & Bulford, Archs., The Ruggery, Columbus, announce that the plans and specifications for the building to be erected by the Ohio National Bank at the corner of High and Town Sts. will be ready for figuring soon. The building will be entirely of stone. Bids for construction will be received until Aug. 3.

Marriott & Allen, Archs., 420 Hayden St., are preparing plans for the improvements to be made at the Ohio Penitentiary which are estimated to cost about $200,000.

LIMA, OHIO.—F. L. Packard, Hayden Bldg., Columbus, is preparing plans and specifications for an addition to the Lima State Hospital.

DELAWARE, OHIO.—The contract for rebuilding the Delaware High School building has been awarded to W. B. WINTERS, of Columbus, at his bid of $40,000.

FAIRPORT, OHIO.—A school building will be erected at Fairport, from plans prepared by Franz C. Warner, Arch., Citizens' Bldg., which provide for a 12-room fireproof structure. The contracts for this work will be awarded this month.

TERRE HAUTE, IND.—The School Trustees have employed Foltz & Parker, Archs., Pythian Bldg., Indianapolis, Ind., to prepare plans for the construction of the proposed Davis Park grade school building on 18th and Puplar Sts. The building will contain twelve class rooms, a German room, a kindergarten room, an office room and an assembly room. Bids will be asked for soon.

DELPHI, IND.—Bids are asked by the Commissioners of Carroll County until noon, July 25, for the construction of a county infirmary building. The structure will be of brick and concrete. M. G. Haun is County Audr.

FT. WAYNE, IND.—It is reported that Price & McLanahan, Archs., 1624 Walnut St., Philadelphia, have been employed to make plans for the erection of a $1,000,000 Union Station to be erected here by the Pennsylvania, Wabash, Lake Shore & Michigan Southern railroads.

ELKHART, IND.—The School Board has employed E. Hill Turnoch, Arch., to prepare plans on which bids will be asked for the construction of a school building in Willowdale on Michigan St.

BLOOMINGTON, IND.—The local Y. M. C. A. Trustees have appointed a building committee to select plans and award a contract for the construction of a $50,000 Y. M. C. A. building in this city.

INDIANAPOLIS, IND.—The Trustees of the Fourth Christian Church have ordered plans for the erection of a brick and stone church on North West St.

Dr. H. R. Allen has purchased a site at the corner of Alabama and Wabash Sts. on which he proposes to erect a business block.

EVANSVILLE, IND.—The Evansville Tubeculosis Society has ordered plans on which to ask for bids for the construction of a tuberculosis hospital building on the Boehm farm.

EVANSVILLE, IND.—Harry E. and Roland Woods have purchased a site on Main St. on which to erect a 7-story office building. Bids will be in order as soon as plans are made and approved.

LOGANSPORT, IND.—The city is planning to construct a city hospital to cost $100,000, the gift of George F. Johnson. Judge M. J. Winfield, of this city, has the matter in charge.

CROSWELL, MICH.—George L. Harvey, 201 Huron Ave., Port Huron, Mich., is preparing plans for a bank building for the Croswell State Bank. Construction will be of white stone with composition roof, galvanized iron skylight, stone cornice, oak and marble finish, rubber tile floors and gas and electric fixtures.

PONTIAC, MICH.—W. J. Fisher, Beaudett Block, has been commissioned by the Board of Education, E. R. Webster, Secy., to prepare plans and specifications for two 10-room schools. Cost, $80,000.

DETROIT, MICH.—The B. O. P. E., Vincent Field, Secy., Moffat Bldg., have purchased a site at Madison Ave. and John R. St., and will erect a $750,000 building.

Spier, Rohns & Gehrke, Chamber of Commerce Bldg., have been commissioned by the Buick Motor Co., 750 Woodward Ave., to prepare plans for a 2-story automobile garage, 200 × 300 ft. Cost, $70,000.

DETROIT, MICH.—Malcomson & Higginbotham, Moffat Bldg., are preparing plans for a 12-room brick school for the Board of Education. The school is to be located at Springwells and Ferndale Ave. Cost, $55,000. Smith, Hinchman & Grylls, Engrs., Washington Arcade. W. J. Lee, Secy., 50 Broadway, Detroit.

The same architects and engineers are preparing plans for an 8-room addition to the Bellevue School, Bellevue Ave. and Champlain St. Structural iron, press and stock brick, bedford stone trimmings, composition roof and electric fixtures will be used in construction.

The same architects and engineers are also preparing plans for a school for the Board of Education to be located at Alexandrine and Rivard Sts. Cost, $73,000.

Van Teyen & Schilling, Union Trust Bldg., have been commissioned to prepare plans for an office and bank building, 16 stories and basement, 37 × 100 ft., for the Metropolitan State Bank, S. Francis Walsh, Secy., Union Trust Bldg.

KALAMAZOO, MICH.—B. Van Bochove, Hotel Portage, Arch. and owner, is preparing plans for an 80-room hotel with four stories and basement, 60 × 100 ft. Cost, $40,000. The building is to be of press brick, with stone trimmings, composition roof, galvanized iron skylight, birch and oak finish, mosaic tiling and gas and electric fixtures.

The Masons, M. H. Lane, Michigan Buggy Co., Secy., are contemplating a 6-story assembly hall and office building, 100 × 100 ft., to cost $100,000. Architects have not been selected.

FLINT, MICH.—E. W. Wood, National Bank Bldg., is preparing plans for a 3-story and basement department store, 70 × 132 ft., for Thomas Baker, of Flint. Paving brick, with Bedford stone trimmings, structural iron, concrete roofing and electric fixtures will be used in construction.

JACKSON, MICH.—A 6-story association building is contemplated. Cost, $50,000; architects not selected. B. J. Glasgow, 135 Main St., is Chn. of Bd.

CHICAGO, ILL.—Organization of a holding company to build and maintain a $5,000,000 home for the Board of Trade on the site of the Board's present building, Jackson Boulevard and La Salle St., has been recommended to the members of the Board by the committee appointed last August to solve the board's building problem. According to the Chicago "Record-Herald," the new building is to be twenty stories high, and is to cost at least $4,900,000, and in financing the proposition it is recommended that the company or trust will provide $2,400,000 stock and bond the property for $2,500,000. The Building Committee is composed of Alexander O. Mason, Chn.; John B. Adams, Hiram Sager, Jerome G. Steever and Robert McDougal.

BELOIT, WIS.—Bids were received as follows on July 7 by James Knox Taylor, Superv. Arch. of the Treasury Dept., Washington, D. C., for the construction of a post-office at Beloit, Wis.: General Construction Co., Hathaway Bldg., Milwaukee, Wis., $68,289; Bartlett & Kling, Inc., Cedar Rapids, Iowa, $74,490; G. Maffioli & Sons, Rockford, Ill., $68,000; Carl J. Lange, Appleton, Wis., $78,975; Northern Construction Co., 421 Milwaukee St., Milwaukee, Wis., $74,830; Conners Bros. Co., Lowell, Mass., $71,000.

KENOSHA, WIS.—The GENERAL CONSTRUCTION CO., Hathaway Bldg., Milwaukee, has been awarded the contract to erect the proposed city hall here, at $50,966. The lumbing and heating contracts have been awarded to DOWNEY & KRUSE, of Milwaukee. for $4,173. Only one other bid was received on the general work, that of the Northern Construction Co., 421 Milwaukee St., Milwaukee, at $55,500. Joseph Lindl, 312 Main St., Kenosha, is Arch.

MADISON, WIS.—The Executive Committee of the Board of Regents of the University of Wisconsin has awarded the contract for the erection of the proposed biology laboratory to T. C. McCARTHY, of this city, at $193,000. Mr. McCarthy's original bid, which was the lowest submitted, called for $201,000, but was revised to $193,000 after the Regents decided to eliminate some of the construction work.

AUSTIN, MINN.—See under Washington, D. C.

COLUMBUS, NEB.—Bids were received as follows on July 11 by James Knox Taylor, Superv. Arch. of the Treasury Dept., Washington, D. C., for the construction of a post-office building at Columbus, Neb.: J. H. Wiese, South Omaha, Neb., $69,850; North Western Construction Co., Kearney, Neb., $68,500; General Construction Co., Milwaukee, Wis., $67,785; Bartlett & Kling, Inc., Cedar Raids, Iowa, $64,180.

PLATTSMOUTH, NEB.—See under Washington, D. C.

CLINTON, MO.—See under Washington, D. C.

ST. LOUIS, MO.—The Manchester Bank of St. Louis will begin building operations at 4011 Manchester Ave. on its proposed $60,000 bank building, to be done in Bedford stone. Ground fronting 60 ft. on the north side of Manchester Ave., east of Sarah St., having a depth of 133 ft., has been transferred from Charles Timmerberg to the bank. The new building will be two stories high and will be used wholly by the bank. The ground floor will be devoted to the counting room, while the second story will be given over to general offices. It will be completed by Jan. 1. Albert B. Graves is Arch., 314 North Fourth St.

DALLAS, TEX.—A permit was issued on July 1 for a 5-story hotel to be erected by A. W. Campbell at 472 Elm St. The structure will be fireproof and will cost $85,000. It will be called "The Roy."

DEL RIO, TEX.—Alfred Giles, Arch., of San Antonio, Tex., has prepared plans for a building to be erected here by the Del Rio National Bank. It will be two stories high and constructed of pressed brick.

EL PASO, TEX.—HEWITT & SON have been awarded contract for the erection of a 3-story addition to the central exchange building of the Tri-State Telephone Co. Cost, $100,000.

PALESTINE, TEX.—Bids are asked until 3 p. m., Aug. 19, by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., for the construction complete (including plumbing, gas piping, heating apparatus, electric conduits and wiring), of the U. S. post-office at Palestine, Tex.

BREMERTON, WASH.—Bids were received as follows on July 12, by the Quartermaster of the Marine Corps, Washington, for the construction of (a) one barracks; (b) two junior officers' quarters; (c) one commanding officers' quarters at the Navy Yard, Bremerton, Wash.: Pacific Construction Co., 251 Kearny St., San Francisco, (a) $178,000, (b) $34,000, (c) $17,250; Megrath & Duhamel, White Bldg., Seattle, Wash., (a) $162,366, (b) $32,765, (c) $19,565; L. A. Williams & Son, Seattle, Wash., (a) $208,500, (b) $49,958, (c) $23,834.

MEDFORD, ORE.—Contracts will be let at once for the proposed 4-story hotel to be erected at the corner of Main St. and Riverside Ave., by Dr. F. E. Page. Electric elevators will be installed. Cost, $75,000. The building will contain 100 rooms.

PORTLAND, ORE.—Plans have been prepared by D. C. Lewis, Arch., Couch Bldg., for a 4-story brick building at the northwest corner of Grand Ave. and Belmont St., projected by Edward Daly and J. Edwards. Cost, $70,000.

Contracts, aggregating $178,427, have been signed by County Judge Cleeton and the County Commissioners for construction work on the east wing of new court-house. Installing marble, tile work, scagliola and cement floors and base was let to the SCHANAN-BLAIR CO. for $93,000; to J. McVUSKER, contract for heating, ventilating and installing galvanized iron works, at $25,235; J. O'HARE, for lathing, plastering and putting in tile partitions, at $43,900.

SAN DIEGO, CAL.—Plans are being prepared in the office of MacDonald & Applegarth, Arch., Call Bldg., San Francisco, for a 3-story hotel building to be erected on the corner of Sixth and O Sts. by Dr. F. R. Burnham and Creighton McMurtrie, at a cost of $93,000.

Quayle Bros., Archs., Granger Bldg., are preparing plans for a theater building for Palmer Bros. It will be three stories high, 94 × 150 ft., of brick over steel frame with tile roof. The general contract has been let to the SAN DIEGO CONSTRUCTION CO., 1117 D St. The cost will approximate $120,000.

SACRAMENTO, CAL.—A 6-story brick and reinforced building to cost $120,000 will be built for Nicolaus, Gaven & Southworth. C. W. Dickey, Oakland Bank of Savings Bldg., Oakland, is Arch.

It is the intention to remodel the Clinic Theatre. Estimated cost, $150,000. Bliss & Faville, Balboa Bldg., San Francisco, Cal., are Archs.

A 5-story Class C building, to cost $50,000, will be built for White & Donnelly. C. E. Hemmings, 224 Kearny St., San Francisco, Cal., is Arch.

REDLANDS, CAL.—The contract for the erection of two brick buildings for the Polytechnic High School has been awarded to TAYLOR BROS., at $61,827. The heating contract has been awarded to the MACHINERY & ELECTRICAL CO., of Los Angeles, at $2,970; painting, awarded to J. H. ALDER, at $1,500.

LOS ANGELES, CAL.—A 5-story hotel and apartment house is to be built for R. J. Cope on a lot at the southeast corner of Eighth St. and Grand Ave. The contract has been let to GRICHTON SMITH & CO. Cost, $100,000.

A. L. Haley, Arch., Citizens' National Bank Bldg., has awarded contract to ROWLAND & PREUSS, Exchange Bldg., for the erection of a 4-story brick hotel and store building at the corner of Eighth and Main Sts., for Magdelena W. Sabichl. Cost, $88,300.

WATER SUPPLY—IRRIGATION.

*(*Denotes that this work is advertised in Engineering News.)*

NEW YORK, N. Y.—Bids were received as follows on July 6 by Henry S. Thompson, Comr. Water Supply, Gas and Electricity, for (a) furnishing, delivering and laying water mains in 204th St. and (b) in Cherry, Beekman, Dover, Ferry, Frankfort, Front, Fulton, Gold, John, Nassau, Oak, Pearl, Platt, Roosevelt, Rose, South, Spruce, Vandewater, Water and William Sts., New Bowery, Burling Slip, James Slip, Peck Slip and Maiden Lane: (a) Joseph Burns, 147 East 125th St., $35,589; Thomas Crimmons, $42,212; Henry W. Fox, $37,700; O'Leary & Falannigan, $40,347; Louis D. Gregory, $37,806; Haggerty & Drummond, $47,474; F. V. Smith Contracting Co., 157 East 125th St., $35,139; F. N. Lewis, $33,731; (b) James H. Holmes, 87 Nassau St., $262,236; Haggerty & Drummond, $369,531; James R. Brown, $391,588.

*PLATTSBURGH, N. Y.—Bids will be received at the office of the Board of Public Works until 7 p. m., July 22, for the construction of a dam on the West Brook about 1,000 ft. above the present dam. Plans, specifications, form of proposal, etc., may be seen at the office of the Board after July 10. Bids will be received for the construction of the dam proper; for grubbing and for mucking jointly or separately. A. G. Senecal is Mayor.

*BATAVIA, N. Y.—Bids will be received until noon, July 23, by Fred New, Village Clk, for furnishing all material and building a concrete dam of 600 cu. yds., 500 ft. 16-in. c.-i. pipe, screen chambers, waste gate and valves. Apply to village clerk for plans and specifications. R. A. Wentworth is Engr.

*PERRY N. Y.—Bids will be received by the Board of Water Commissioners, addressed to O. N. Bolton, Village Clk., until 1 p. m., July 28, for furnishing and erecting a 2,000,000-gallon cross-compound, crank and fly-wheel Corliss condensing pumping engine. Specifications may be obtained upon application to O. N. Bolton, Village Clk., and are also on file at the office of Engineering News, New York.

LONG ISLAND CITY, (L. [illegible] N. Y.—The Board of Estimate has au[illegible] an appropriation of $450,000 for [illegible] water supply for Queens Borough. [illegible] plan contemplates laying a 48-in. pip[illegible] through 82d St., Manhattan, from th[illegible] [illegible]ral Park reservoir to the East River, [illegible] pipe line under the East River to be [illegible] in diameter and the distributing [illegible] in Long Island City to be reduced to [illegible]

MASONTOWN, PA.—The ci[illegible] on June 28 voted in favor of issuing $[illegible] of bonds for the construction of a wa[illegible] and sewer system.

JOHNSTOWN, PA.—The [illegible] Council has granted a franchise to the [illegible] Water Co., to lay a large [illegible] main through the city.

EMPORIUM, PA.—We are [illegible] ad-vised that H. B. Norton, C. E., [illegible] Pa., is preparing plans and specifi[illegible] for the extension of the Emporium [illegible]-works system. This includes the con[illegible] of a storage reservoir holding appr[illegible] 000,000 gallons of water, and [illegible] laying of nearly three miles of 12-in. [illegible] water mains. Plans and specifica[illegible] will be ready in a week or two. Inqu[illegible] should be addressed to the Emporium [illegible] Co., Emporium.

OLD POINT COMFORT (For[illegible] Monroe post-office), VA.—The [illegible]rnment will make various improv[illegible] on Fisherman's Island, including th[illegible] construction of water-works. Plans have [illegible] prepared and bids will be asked. [illegible]timated cost, $12,000 to $15,000. Dr. Cu[illegible], of United States Quarantine Station, [illegible] Point Comfort, may be addressed.

CLARKSBURG, W. VA.—Contr[illegible] for the construction of the new water-w[illegible] here has been awarded to the NEW Y[illegible] CONTINENTAL JEWELL FILT[illegible]ATIO[illegible] CO., 15 Broad St. The contract for the [illegible] and pipe laying went to JOHN I. D[illegible], Scottdale, Pa. Bids were opened on Ju[illegible] 15. List of bidders noted on June 30.

FORT MOULTRIE, S. C.—Bids w[illegible] be received until July 29 by the Co[illegible]structing Quartermaster, U. S. A., for the [illegible]onstruction of three reinforced concrete [illegible]eservoirs and water-distributing system for fire purposes.

SYLVANIA, GA.—The city will receive bids until July 20 for the construction of water-works of 100,000 gallons capacity. Estimated cost, $20,000. J. B. McCrary Co., Atlanta, Ga., are Engrs.

CHIPLEY, FLA.—The city has voted bonds for improvement to the water-works.

FORT MORGAN, ALA.—The Constructing Quartermaster has awarded contract to W. C. PEASE, of Atlanta, Ga., for the construction of a reinforced concrete cistern with a capacity of 11,500 gallons. Bids were opened on June 21.

BESSEMER, ALA.—The City Council has granted a franchise to the Birmingham Water, Light & Power Co., which proposes to construct the system within two years.

*GADSDEN, ALA.—Bids are asked by the Board of Mayor and Council until 7 p. m., Aug. 4, for water-works station, filters, machinery and extension. Drawings and details may be examined and blank form of specifications and bid sheet be obtained of R. M. Wilbank, City Clk., or Hazelhurst & Anderson, Consulting Engrs., Atlanta, after July 20, and to whom requests for additional information should be addressed.

NEW HAVEN, KY.—The city will construct a water-works system.

LAKEWOOD, OHIO.—Bids are asked until noon, July 18, by B. M. Cook, Village Clk., for the necessary labor and material for the construction of the water main in Donald Ave.

ROCKDALE (Joliet Post-Office), ILL.—Plans are being prepared for the installation of a water-works system here, which will probably be installed this summer.

BEECHER, ILL.—The Village Board has decided to install an air pressure water-works system in the city.

TOULON, ILL.—On June 28 the citizens voted to issue $15,000 of bonds for the construction of water-works.

GALESBURG, ILL.—Bids will be received at the office of B. J. Huff, Jr., City Clk., until noon, July 25, for furnishing and erecting boilers, grates, superheaters, britchens, chimney and pumping machinery, coal house and covering reservoir for the Galesburg water-works plant. Plans, specifications and proposal forms are on file and may be seen at the office of the City Clerk.

ANNA, ILL.—See item under Sewers.

WAUSAU, WIS.—Bids are asked until July 27 by the Board of Water Commissioners for the construction of a system consisting of ten deep driven wells; two batteries of boilers, each battery having two boilers; one boiler house and coal storage. B. C. Gowan is City Engr.

WATERLOO, WIS.—Bids will be received by F. E. Perchel, Village Clk., until July 16 for c.-i. water pipe and a 100,000-gallon standpipe. Estimated cost, $28,000. James H. Thompson, 324 Dearborn St., Chicago, Ill., is Engr.

CHISHOLM, MINN.—Bids are asked until noon, July 22, by E. I. Casey, Village Recdr., for the construction of two reinforced concrete settling basins and appurtenances for the improvement of the water purification plant. Daniel W. Mead, Madison, Wis., is Consulting Engr. Estimated cost, $8,000.

WAKONDA, S. DAK.—Bids will be received until July 20 by W. O. Knight, Town Clk., for constructing water-works.

CHEYENNE, WYO.—Bids are asked until July 18 by the city for 3,300 tons of c.-i. water pipe, also necessary specials, lead, jute, etc., for constructing the lines.

Bids are asked until Aug. 1 for laying ten miles of pipe lines, for furnishing cement for diversion dams and also for hauling and distributing material. C. C. Carlisle is City Engr.

WHEATLAND, WYO.—Bids are asked until 8 p. m., July 15, by Charles Brechner, Town Clk., for furnishing materials and labor for the construction of water-works, sanitary sewer and electric light plant. J. C. Hansell, Wheatland, is Engr.

FORT MISSOULA, MONT.—Bids will be received by A. B. Shattuck, Const. Q. M., U. S. A., until 9 a. m., July 30, for the construction proper of a reinforced concrete pumping station, supply and installation of all boilers, steam pumps, valves, etc. Alternate bids will be received for pumping station using motor-driven pumps, including motors, pumps, etc. Bidders should state whether they wish to bid on steam or electrically driven pumps.

CALIFORNIA, MO.—The city awarded contract to BURNS & McDONNELL, Scarritt Bldg., Kansas City, Mo., for the construction of water-works. Estimated cost, $30,000.

LESLIE, ARK.—The City Council has granted a franchise to J. W. Vaughn and James F. Kiser, of Leslie, to construct water-works and electric-light plant here.

BROWNSVILLE, TEX.—The city will improve the water-works. Estimated cost, $15,000. Contract has been let to W. E. RANDELL, of Brownsville, for the construction of settling tanks.

FORT SAM HOUSTON, TEX.—Bids are asked by P. W. Guiney, Const. Q. M., U. S. A., until 11 a. m., Aug. 4, for the construction of a smokestack 85 ft. high for pumping and ice plant here.

CARNEGIE, OKLA.—The city has engaged the Oklahoma Engineering Co., 120 Broadway, Anadarko, Okla., as engineer in charge of proposed improvements to be made to the water-works. Estimated cost, $25,000. Bids will soon be asked. S. D. Robohn is City Clk.

ALTUS, OKLA.—The city has engaged the J. W. Maxcy Co., Scanlan Bldg., Houston, Tex., to supervise improvements to the water-works. Estimated cost, $130,000.

PUYALLUP, WASH.—About 5,000 feet of water pipe will be laid in Murray and other streets.

SEATTLE, WASH.—The Council has passed ordinances providing for a water main district in South 35th to 40th Sts., and Sprague to Columbia Sts. Estimated cost, $67,143.

FORT WORDEN, WASH.—See item under Sewers.

LA GRANDE, ORE.—The NEWPORT ENGINEERING CO., of Portland, has been awarded contract for laying two miles of 18-in. water pipes.

JOSEPH, ORE.—Bids will be received until 8 p. m., July 20, for the construction of the proposed gravity water supply system. The supply is to come from the Wallowa Lake, less than a mile from the city and at 200 ft. elevation above the city. Amount of bonds issued, $20,000. Augustine White is City Recdr.

SAN PEDRO, CAL.—The water mains on Terminal Island will be extended to Brighton Beach Hotel and connected with the fire pump at the mill of the National Lumber Co.

LOS ANGELES, CAL.—Bids are asked until 2 p. m., July 22, by the United States Reclamation Service, 626 Citizens' National Bank Building, Los Angeles, for furnishing 58-in. balanced valves for the North Platte project, Wyoming, and the Belle Fourche project, South Dakota. For particulars address U. S. Reclamation Service, Los Angeles, or Washington, D. C. F. H. Newell is Dir.

VALLEJO, CAL.—We are officially advised that the city proposes to construct a reservoir pipe line. E. P. Noyes is City Engr.; George Savage is Supt. W.-Wks.

PROVO, UTAH.—We are officially advised that bids will probably be asked in about four weeks for the proposed new water-works conduit. E. A. Jacob is City Engr.

SALT LAKE CITY, UTAH.—Surveys for laying a new water main from City Creek Canyon, which will supply the north bench with water, are now being made by the City Engineer's office as the preface to an expenditure of more than $100,000 in the future. Owing to the scarcity of water on the bench this year, amounting to almost a famine in several localities, a plan has been made for the distribution of more water.

NEW WESTMINSTER, B. C.—The PACIFIC COAST PIPE CO., of Vancouver, has been awarded contract for 50 miles of wood pipe at $79,820.

NANAIMO, B. C.—The citizens have voted to issue $25,000 of bonds for water-works improvements. Most of the work is to be done by day labor. Allan Waters, of Nanaimo, is Engr.

SEWERS.

(*Denotes that this work is advertised in *Engineering News*.)

PORTLAND, ME.—Bids for the construction of the sewer at Morrills Corner, 2,598 ft., between Reed St. and the Maine Central R. R. crossing, were opened on July 1 at the office of Commissioner of Public Works. Two bids were received, as follows: Forgione & Romano, $13,380; MAHONEY CONSTRUCTION CO., $10,170 (awarded contract).

YARMOUTH, ME.—FALES & SIMMONS, of Rockland, Me., have been awarded contract for the construction of 5,637 ft. of sewer here.

BOSTON, MASS.—The following bids were received on June 9 at the Bureau of Yards and Docks, Navy Dept., Washington, D. C., for a drain at the U. S. navy yard, Boston: Commonwealth Construction & Supply Co., Boston, $3,179; Michael Russo, Boston, $3,400; Thos. Fitzgibbon, Beverly, Mass., $3,495; C. M. Leach, Boston, $3,333; Jones & McChan, Boston, $4,450; John J. Falvey, Somerville, Mass., $3,567; M. McMann Construction Co., Boston, $2,673; John F. Coleman, Chelsea, Mass., $3,490; John McCourt & Co., Boston, $3,812; McCarthy & Walsh, East Boston, $3,247.

*ATTLEBORO, MASS.—Bids were received on July 6 by the Commission on Sewerage for seven contracts for the construction of a trunk sewer and filtration areas. The bids and awards of contract follow: Contract A, filtration field—R. H. NEWELL, Uxbridge, $36,793 (awarded contract); C. E. Trumball Co., Boston, $41,864; Rome Contract Co., Boston, $42,560; Thomas Fitzgibbon, Beverly, $43,160; Bruno & Petitti, Boston, $44,263; Tyrell & Gill Co., Winter Hill, $49,750; James H. Fannon, Somerville, $52,741; A. J. Tomasello, Dorchester, $53,266; Michael Kane, Worcester, $65,502. Contract B, first section concrete sewer from fields to Tiffany, 30-in. pipe concrete—Bruno & Petitti, Boston, $58,876; A. G. Tomasello, Dorchester, $63,932; George Phillips, Boston, $67,165; John J. Falvey, Somerville, $98,562 (contract not awarded). Contract C, concrete and iron pipe, 30-in., extending from Tiffany to Thacher St.—Bruno & Petitti, Boston, $33,189; A. G. Tomasello, Dorchester, $47,373; John J. Falvey, Somerville, $52,492 (contract not awarded). Contract D, vitrified pipe, for filter fields, from 3 to 24-in., not awarded—Brownell Hardware Co., Attlebroro, $4,295; Eastern Clay Goods Co., Boston, $4,295; Berry & Ferguson, Boston, $4,662; David W. Lewis, Boston, $4,555; American Pipe Co., Boston, $4,555; American Pipe Co., Boston, $4,691; Thomas Robinson Co., Philadelphia, $5,357; Waldo Brothers, Boston, $5,361; awarded to BROWNELL HARDWARE CO., Attleboro. Contract E, iron pipe, from 6 to 30-in. with special castings, to be used in contracts A, B and C—Charles Miller & Sons Co., Utica, $10,714; R. D. Wood & Co., Philadelphia, $11,106; Fred A. Houdelette, Boston, $11,149; Fred A. Houdelette, Boston, $11,180; Warren Foundry & Machine Co., New York, $11,322; M. J. Drummond Co., New York, $11,528; U. S. Cast Iron Pipe & Foundry Co., New York, $12,530; awarded to CHARLES MILLER & SONS CO., Utica, N. Y. Contract F, manhole covers and collars—Concord Foundry Co., Concord, $590; Milford Iron Foundry, Milford, $637; Sessions Iron Foundry, Bristol, Conn., $650; Sessions Iron Foundry Co., Bristol, Conn., $723; Builders' Iron Foundry, Providence, $774; Paul Hannigan, Lawrence, $850; Springfield Foundry, $870; White, Warner Co., Taunton, $872; awarded to CONCORD FOUNDRY CO. Contract C, water and sewer gates and boxes—Ludlow Valve Co., Troy, $4,093; Coffin Valve Co., Neponsett, $4,654; Chapman Valve Co., Indian Orchard, $4,678; H. H. Davis, Boston, $6,018; awarded to LUDLOW VALVE CO., Troy, N. Y. J. J. Van Valkenburgh is Engr.

PUTNAM, CONN.—Contract for the construction of sewers in Chapel, Bridge, Church and Marshall Sts. and Woodstock Ave., bids for which were opened on July 6, has been awarded to PETRO SUZIO & CO., Hartford, Conn., at $3,420.

FARMINGTON, CONN.—Bids will be received by the borough until 5 p. m., July 18, for the construction of a sewer in Cedar St., approximately 970 lin. ft. in length, including one manhole cover and one flush tank; also one length of 8-in. cast-iron pipe.

NIAGARA FALLS, N. Y.—The construction of an extension to the 22d St. tunnel trunk sewer at a cost of $106,000 and for a sewer in Lafayette Ave. at a cost of $5,700 has been authorized by the city.

NEW YORK, N. Y.—Bids were received as follows on July 6 by Lawrence Gresser, Pres. Boro. Queens, for (a) constructing sewer and appurtenances in Cypress Ave., from Myrtle Ave. to Cooper St., Second Ward; (b) 14th Ave., from Van Deventer Ave. to Flushing Ave., and in Wilson Ave., from 15th Ave. to 13th Ave., First Ward: (a) Ryan & Reilly, $67,194; H. J. Mullen, $72,081; Hicks Johnson, $63,243; Peace Bros., $63,490; Haggerty & Drummond, $83,183; John Williams, $84,202; Newman & Carey, $68,498; Thomas J. Carlin, $63,765; (b) P. P. Farley, $14,959; Green Construction Co., $13,750; H. T. Mullen, $12,574; Peace Bros., $13,684.

NEW YORK, N. Y.—Bids were received as follows on July 6 by George McAneny, Pres. Boro. Manhattan, for furnishing all the labor and materials required for the construction of a sewer and appurtenances in Northern Ave., between 181st St. and 190th St.: Joseph Burns, $54,651; Frances M. Palladina, $48,902; Walter J. Ford, $50,908; Jos. More, $55,167; O'Leary & Flannigan, 245 East 202d St., New York, $41,248; Terry & Tench, $48,376.

BROOKLYN, N. Y.—Bids were received as follows on the percentage basis by Alfred E. Steers, Boro. Pres., on July 6, for furnishing all labor and materials required for the construction of a sewer in Blake Ave., between Howard and Saratoga Aves., and outlet sewers in Grafton St., between Blake Ave. and East 98th St., and in Barrett St., between Blake Ave. and East 98th St.; estimated cost, $23,045: Murphy Bros., 101⁹/₁₀%; Leo E. Kelley, 108½%; P. Pauzie and M. J. Burke, 109%; Newman & Carey, 97¹⁴/₁₀₀%; A. E. Nicholas, 90¾%; Vachits & Celardi, 96%.

*FULTON, N. Y.—Bids will be received by the Board of Public Works until 8 p. m., July 15, for the partial construction of the West Side sanitary sewer system of Fulton. The Engineer's approximate estimate is as follows: 1,400 lin. ft. 12-in., 2,300 lin. ft. 10-in., 9,000 lin. ft. 8-in., 5,000 lin. ft. 6-in. vitrified pipe sewer; 500 Y branches; 15 flush tanks; 35 manholes. T. A. Foster is Pres. Bd.

MILLBURN, N. J.—Bids will be received until 8.30 p. m., July 18, by the Township Committee, First National Bank, Millburn, for constructing about 9,000 ft. of sewers in the township. E. R. Halsey is Township Engr., 164 Market St., Newark.

LANCASTER, PA.—F. X. HINDER & SON have secured contract for constructing sewers in Susquehanna and Rockland Sts., at $5,197, and MYERS & McWILLIAMS for sewers in Stevens Ave., at $14,900. Bids were opened on June 28.

MASONTOWN, PA.—See item under Water Supply—Irrigation.

WASHINGTON, D. C.—The WARREN F. BRENIZER CO., of Washington, D. C., has received contract for constructing sewers in the district. Bids were opened by the District Commissioners on June 20.

ROANOKE, VA.—Bids will be received until July 26 by W. L. Crafts, City Clk., for constructing sewers in portions of several streets. F. L. Gibboney is City Engr.

SYLVANIA, GA.—The city will receive bids until July 20 for the construction of a sewer system. Estimated cost, $9,000. J. B. McCrary Co. are Engrs., Atlanta, Ga.

ST. PETERSBURG, FLA.—Bids will be received by W. F. Divine, City Clk., until Aug. 11 for furnishing material and laying 1,800 lin. ft. of 16-in. c.-i. flange outlet sewer pipe into Tampa Bay. Separate bids will be received for laying and furnishing all material except pipe, which the city will furnish. M. W. Spencer is City Engr.

ATTALLA, ALA.—Bids are asked until July 26 by the town for about 6½ miles of pipe sewers and appurtenances. Plans on file with L. S. Gray, Town Clk., Willburn Hill, Gadsen, is Engr.

MEMPHIS, TENN.—Heiskell Weatherford, City Engr., will prepare plans for the construction of sewers in the annexed territory from Trigg Ave. to Parkway, west of the Yazoo & Mississippi Valley R. R., and from Florida to Main Sts.

LOUISVILLE, KY.—The HENRY BICKEL CO., of Louisville, has secured the contract for constructing sewers under Contract "C," at $19,572, and FRANK SHEFELD, of New Albany, Ind., for sewers under Contract "D," at $9,866. Concrete and pipe are to be used.

LAKEWOOD, OHIO.—Bids are asked until noon, July 18, by B. M. Cook, Village Clk., for the construction of and material for a sewer in Donald Ave.

TOLEDO, OHIO.—Bids will be received until July 15 by the Board Public Service for constructing local sewer No. 1101. Fred. Shane is Secy.

JEFFERSON, OHIO.—GEORGE WALLER & CO., of Erie, Pa., have received contract for constructing the sewer system here, at $36,000.

EAST CHICAGO, IND.—Bids will be received by the city until July 20 for the construction of sewer in 151st Ave., to include 1,800 ft. 12, 15 and 18-in. vitrified pipe. Estimated cost, $4,500. R. K. Wallace is City Engr.

INDIANAPOLIS, IND.—The Board of Public Works has ordered plans on which bids will be asked for the construction of a local sewer in and along McPherson St., from 13th St. to Southerland Ave., and a local sewer in and along Bellefontaine St., from 30th St. to Southerland Ave.

ELKHART, IND.—The NORTHERN CONSTRUCTION CO., of Elkhart, has secured contract for constructing the East Jackson St. sewer, at $19,733. The only other bidder was J. M. Fishley, at $22,154.

LAPORTE, IND.—Bids will be received until 7.30 p. m., July 15, by the Common Council for constructing the Scott, Washington, Madison and Fifth St. sewers, requiring about 17,557 lin. ft. of sewers from 30 to 10-in.; 1,863 ft. 42-in. concrete sewer and a 400-gallon flush tank, etc.

TERRE HAUTE, IND.—The City Council has decided to issue bonds for $40,000 for the construction of sewers in the city.

ANNA, ILL.—The Board of Local Improvements has employed Charles W. Brown, of Jacksonville, Ill., to make surveys and prepare plans and specifications and estimates of cost for a system of sewers and water mains for the city.

KENOSHA, WIS.—Contract for furnishing material and constructing sewers in Oakland and Rice Aves., bids opened on June 24, has been awarded to BARNARD & IVERSON, Kenosha, at about $9,000.

The City Council has adopted a plan for a trunk sewer two miles long which is designed to furnish sewage disposal for the south and southwest portions of the city. Estimated cost, $150,000.

EAST MILWAUKEE, WIS.—The Village Board will receive bids until 7.30 p. m., July 18, on the following three sewers: (1) 1,610 lin. ft. of 36-in., 2-ring brick sewer; 640 ft. of 30-in., 2-ring brick sewer, to include 340 ft. of 15-in. pipe laterals, 26 manholes, 19 catch-basins and all connections; (2) 50 lin. ft. of 54-in., 2-ring brick sewer; 1,486 ft. of 48-in., 2-ring brick sewer; 1,775 ft. 42-in., 2-ring brick sewer, to include 690 ft. of 15-in. pipe laterals, 37 manholes, 22 catch-basins and all connections; (3) 270 ft. of 66-in., 2-ring brick sewer; 940 ft. of 60-in., 2-ring brick sewer; 642 ft. of 54-in., 2-ring brick sewer; 650 ft. of 42-in., 2-ring brick sewer; 785 ft. of 36-in., 2-ring brick sewer; 1,740 ft. of 30-in., 2-ring brick sewer, to include 330 ft. of 18-in. pipe laterals and 260 ft. of 15-in., 46 manholes, 23 catch-basins and connections.

WEST SALEM, WIS.—Contract for furnishing material and constructing sewers, bids opened on June 30, has been awarded by the city to F. E. KAMINSKI, of Watertown. S. W. Brown is City Clk.

BATTLE CREEK, IOWA.—Bids will be received by the Mayor about Aug. 15 for constructing a sewer system of 6, 8 and 12-in. vitrified pipe. Estimated cost, $7,000. E. E. Carlson, of Battle Creek, is Engr.

HARTINGTON, NEB.—E. L. DIMICK, of Laurel, has secured the contract for constructing three miles of 8-in. lateral sewers at 55 cts. per ft. Skeels & Beck, of Sioux City, are Engrs.

WHEATLAND, WYO.—See item under Water Supply—Irrigation.

*ST. LOUIS, MO.—Contracts have been awarded as follows by the Board of Public Improvements: To BAMBRICK BROS. CONSTRUCTION CO., 5229 St. Louis Ave., St. Louis, for South Harlem Joint District sewer; to SOUTHERN CONSTRUCTION CO., Mermod and "T" Bldg., St. Louis, for first section of River des Peres foul water sewer. W. B. Dryden is Secy. Bd.

Bids are asked by the Board of Public Improvements until noon, July 19, for the construction of various sewers.

MEMPHIS, TEX.—The City Council has engaged E. L. DALTON, of Dallas, Tex., to prepare plans and specifications for a sanitary sewer system here. Estimated cost, $20,000.

ALTUS, OKLA.—The city has awarded contract to J. W. MAXCY CO., Scanlan Bldg., Houston, Tex., for improvements to the sewer system. Estimated cost, $25,000.

COLORADO SPRINGS, COLO.—The State Realty Co. has let a contract to ARGUST BROS., for the construction of 1,700 ft. of 8-in. sewer through their recent state addition to the city.

FORT WORDEN (Port Townsend post-office), WASH.—Bids are asked by Capt. E. C. Lang, Const. Q. M., U. S. A., 482 Arcade Annex, Seattle, Wash., until 11 a. m., July 16, for the extension of water and sewer systems to stable and constructing a sewer from ordnance machine shop, etc.

CHEHALIS, WASH.—The City Attorney has been instructed to have plans prepared for a sanitary sewer system for the southern part of the city.

OLYMPIA, WASH.—The City Council has authorized the construction of a wooden box combination sanitary and storm sewer through the Swantown slough fill. Estimated cost, $19,198.

SEATTLE, WASH.—Bids were received by the Board of Public Works on July 1 as follows for the construction of the Lake Washington District of the North Trunk sewer: F. McLellan, Burke Bldg., Seattle, $779,671 and $781,071; Grant, Smith & Co., Second Ave. and Ball St., Seattle, $816,335 and $816,635; C. J. ERICKSON, Seattle, $709,939 (awarded contract). R. H. Thomson is City Engr.

SUTTER CREEK, CAL.—The town is contemplating the construction of a sewer system.

ALAMEDA, CAL.—Plans and specifications for the construction of the south side sewers have been adopted by the City Council. Bids will be asked soon.

COLTON, CAL.—The City Trustees will soon ask for bids for the construction of the municipal sewer system. Bonds for $63,000 have been voted. W. L. Brown is City Engr.

WINNEMUCCA, NEV.—Bids will be received by the County Board of Commissioners of Humboldt County until Aug. 2 for the construction of a sewer system in this city. Plans and specifications on file at the office of C. W. McDied, Clk. Bd.

MONTREAL, QUE.—Bids were opened on July 8 by the Board of Control for the construction of the last (sixth) section of the Sherbrooke St. sewer. Contract was awarded to KEEGAN & DILLON, 40 Hospital St., Montreal, at $68,768.

STREETS AND ROADS.

(*Denotes that this work is advertised in *Engineering News*.)

PORTLAND, ME.—Bids will be received by Bion Bradbury, Jr., Comr. Public Wks., until noon, July 15, for building a section of bituminous macadam state road, about 1,500 ft. in length.

SOUTH PORTLAND, ME.—Bids will be received by John A. S. Dyer, Mayor, until 2 p. m., July 18, for building a section of gravel road, about 3,000 ft. in length.

CONCORD, N. H.—We are officially advised that contracts were awarded as follows on July 8 by H. C. Hill, State Engr., for road work: To P. A. McINTYRE, of Suncook, N. H., for 1,120 ft. of trap rock road in Allentown; to OSGOOD CONSTRUCTION CO., of Nashua, N. H., for 2,800 ft. of gravel road in Merrimac.

CAMBRIDGE, MASS.—The preliminary report of the Commission upon the Development and Improvement of the Streets of the City of Cambridge contains the following improvement recommendations: Prospect St., creosoted blocks on cement base; Albany and Erie Sts., 6-in. granite block on crushed stone base; Charles St., 4-in. grouted granite block on concrete base; Putnam Ave., brick on concrete base; Mount Auburn St., bitulithic; Massachusetts Ave., bitulithic. The total estimated cost of recommendations amounts to $102,000. The Committee consists of George M. Clukas, Chn.; Edward W. Quinn, Supt. of Streets; Lewis M. Hastings, City Engr., all of Cambridge, and Harris P. Eddy, Consult. Engr., West Newton, Mass. The complete report is on file at the office of Engineering News, New York.

NAUGATUCK, CONN.—It is reported that the borough will construct about 2,000 lin. ft. of brick road 50 ft. wide. William J. Neary is Warden.

HARTFORD, CONN.—Bids for state road work will be received by the State Highway Commissioner until 2 p. m., July 18, as follows: Town of Middletown, 6,300 lin. ft. macadam-telford road, 14 ft. wide, including one reinforced-concrete arch culvert and two 24-in., one 15-in., two 18-in. and one 20-in. tile culverts; town of Middlefield, 12,350 lin. ft. macadam-telford road, 14 ft. wide, including six 24-in., one 15-in. and one 20-in. tile culverts and two reinforced-concrete arch culverts.

HARTFORD, CONN.—Bids for the construction of State road work were received at the office of the State Highway Commissioner on June 11 as follows:

Town of Avon, 7,700 lin. ft. macadam-telford or graded road, including one reinforced concrete arch culvert and five 24-in., four 18-in. and one 15-in. tile culverts, (a)

macadam, (b) grading, (c) telford, (d) rubble drain, (e) cobble gutters: A. Brazos & Sons, Middletown, Conn., (a) $43,250, (b) $38,300, (c) 40 cts., (d) $1.20, (e) 75 cts.; O. T. Benedict, Pittsfield, Mass., (a) $57,000, (b) $49,000, (c) 60 cts., (d) 80 cts., (e) $1; B. D. Pierce, Jr., Co., Bridgeport, Conn., (a) $45,090, (b) $55,850, (c) 65 cts, (d) $1, (e) 60 cts.; P. Suzio Co., Hartford, Conn., (a) $30,000, (b) $28,875, (c) $2.40, (d) $1.65, (e) 60 cts.

Town of West Hartford, 9,885 lin. ft. macadam-telford or graded road, including one 20-in., five 18-in., two 15-in. and three 12-in. tile culverts. (a) macadam, (b) graded, (c) telford, (d) rubble drain, (e) cobble gutters: A. Brazos & Sons, Middletown, Conn., (a) $84,000, (c) 40 cts., (d) $1.25, (e) 75 cts.; O. T. Benedict, Pittsfield, Mass., (a) $75,000, (b) $63,000, (c) 80 cts., (d) 70 cts., (e) $1; B. D. Pierce, Jr., Co., Bridgeport, Conn., (a) $75,762, (b) $63,900, (c) 65 cts., (d) $1, (e) 60 cts.; Peter Suzio & Co., Hartford, Conn., (a) $38,551, (b) $38,057.51, (c) $1.25, (d) $2.40, (e) 60 cts.; A. C. Sternberg & Sons, West Hartford, Conn., (a) $57,000, (b) $55,000, (c) 75 cts., (d) $1.25, (e) 75 cts. A bid was also received from F. Arrigoni & Bro., Durham, Conn., for these two sections of road, aggregating 17,585 lin. ft., for the following prices: (a) $119,000, (b) $99,000, (c) 60 cts., (d) 75 cts., (e) 75 cts.

Town of Warren, 1,900 lin. ft. graded road, including two 15-in. and one 24-in. tile culverts: Goodman & Trumbull, Litchfield, Conn., $2,622 for grading, with 90 cts. per lin. ft. extra for telford, and 90 cts. for rubble drain; B. D. Pierce, Jr., Co., Bridgeport, Conn., $5,400, 65 cts, 65 cts.

Town of Bolton, 3,640 lin. ft. grading, including one 12-in. tile culvert: Goodman & Trumbull, Litchfield, Conn., $4,280 for grading and 90 cts. per lin. ft. extra for telford, 90 cts. for rubble drain and 60 cts. per sq. yd. for cobble gutters; O. T. Benedict, Pittsfield, Mass., $5,550, 70 cts., 70 cts., 80 cts.

Town of Plainville, 7,298 lin. ft. macadam-telford road, including one 15-in. tile culvert: O. T. Benedict, Pittsfield, Mass., $1.19 per lin. ft. for macadam, $1.90 for telford, 75 cts. per lin. ft. for rubble drain; Merritt & Bush, Stamford, Conn., $1.40, $2, $1; A. C. Sternberg & Sons, West Hartford, Conn., $1.33, $2, $1; Roger Kennedy, Middletown, Conn., $1.69, $2.50, $1; B. D. Pierce, Jr., Co., Bridgeport, Conn., $1.47, $2.20, 65 cts.

Town of Farmington, 9,104 lin. ft. macadam-telford, including one 12-in., two 15-in. and two 18-in. tile culverts and a reinforced-concrete arch culvert: A. Brazos & Sons, Middletown, Conn., $1.91 for macadam, $2.31 for telford, 80 cts. for rubble drain; O. T. Benedict, Pittsfield, Mass., $1.59, $2.19 and 75 cts.; A. C. Sternberg & Sons, West Hartford, Conn., $1.60, $2.20 and $1; B. D. Pierce, Jr. Co., Bridgeport, Conn., $1.64, $2.34 and 65 cts.

Town of Winchester, 10,750 lin. ft. of macadam-telford road, including ten 15-in., five 18-in., five 20-in., and three 24-in. tile culverts. (a) all trap rock macadam, (b) native stone macadam, (c) telford, (d) rubble drain, (e) masonry walls: Goodman & Trumbull, Litchfield, Conn., (a) $4.27 per lin. ft., (b) $4.20, (c) 70 cts., (d) 90 cts., (e) $6; A. Brazos & Sons, Middletown, Conn., (a) $4.30, (b) $3.90, (c) 60 cts., (d) $1.25, (e) $5; Merritt & Bush, Stamford, Conn., (a) $4.10, (b) $3.40, (c) 40 cts., (d) $1, (e) $6; John De Michiel & Bro., Torrington, Conn., (a) $3.98, (b) $3.36, (c) 52 cts., (d) $1, (e) $5.

Town of Mansfield, First Section, 1,600 lin. ft. gravel on the Willimantic-Stafford Road: H. L. M. Ladd, New London, Conn., $2,900 and 60 cts. per lin. ft. extra for telford; A. Brazos & Sons, Middletown, Conn., $4,160 and 50 cts. extra for telford; O. T. Benedict, Pittsfield, Mass., $3,040 and 60 cts. extra for telford.

Same, Second section, 2,500 lin. ft. graded road, including two 20-in. tile culverts on the Spring Hill-Storrs Turnpike: A. Brazos & Sons, Middletown, Conn., $4.20 per lin. ft. for grading, 40 cts. for telford, 80 cts. for rubble drain; Clayton F. Curtiss, Glastonbury, Conn., $2.75, 75 cts. and 75 cts.; O. T. Benedict, Pittsfield, Mass., $3.99, 60 cts., 75 cts.; A. C. Sternberg & Sons, West Hartford, Conn., $3.28, $4, $1; Ahern Bros., Norwich, Conn., $3.38, $4.25, $1.15.

Same, Third Section, 13,941 lin. ft. grading on the Storrs College Road, including four 18-in., two 15-in. and one 12-in. tile culverts. A. Brazos & Sons, Middletown, Conn., $54,369.90 for grading, with 50 cts. per lin. ft. extra for telford and 80 cts. for rubble drain; O. T. Benedict, Pittsfield, Mass., $38,000, 80 cts., $1; A. Vito & Co., Thompson, Conn., $31,603.20, 80 cts., $1.

NEW YORK, N. Y.—Bids are asked by the Park Board until 3 p. m., July 21, for furnishing all the labor and materials for reconstructing the roadway of the Eastern Boulevard in Pelham Bay Park, including surfacing with asphaltic earth mixture, from a point 400 ft. north of the Split Rock road to the northerly approach of the new bridge over Eastchester Bay, and from the southerly approach of said bridge to the southern boundary of Pelham Bay Park, in the Boro. of The Bronx, City of New York.

NEW YORK, N. Y.—Bids are asked by George McAneny, Pres. Boro. of Manhattan, until 2 p. m., July 25, for furnishing and delivering 30,000 gallons of No. 6 paving cement, and for furnishing and delivering 1,500 cu. yds. of washed gravel.

Bids are asked by George Cromwell, Pres. Boro. of Richmond, until noon, July 26, for constructing cement cross walks and sidewalks in the Borough of Richmond; for fencing where required on Richmond Terrace, north side, from Jay St. to Westervelt Ave., together with all work incidental thereto; for constructing a temporary combined sewer and appurtenances in Laurel Ave., from Gordon St. to the property of the Mariners' Family Society, in Sewerage District No. 3-B, in the Second Ward, together with all work incidental thereto.

NEW ROCHELLE, N. Y.—Bids will be received by the Board of Public Works until 8 p. m., July 21, for laying curbs, gutters, etc., in Washington Ave. and Petersville Road. Richard Lathers, Jr., is Chn.

KINDERHOOK, N. Y.—Bids are asked by William A. Roraback, Village Clk., for building cement sidewalks in this village. Estimated cost, $10,000. Full information can be had upon application to the Village Clerk.

*ALBANY, N. Y.—Bids are asked by the State Commision of Highways, S. Percy Hooker, Chn., until 1 p. m., Aug. 1, for the following road work: Construction—Cattaraugus County, Road No. 872, Portville Village Road, approximate miles, .65; Erie County, No. 5,061, Williamsville Village Road, 1.08; Herkimer County, No. 868, Dolgeville Village Road, 2.06; Herkimer County, No. 869, Middleville Village Road, .69; Herkimer County, No. 870, Herkimer Village Road, 1.99; Herkimer County, No. 5,069, Poland Village-Cold Brook Village Road, 2.04; Livingston County, No. 867, Dansville Village Road, 1.09; Wayne County, No. 5,070, Clyde Savannah Road, Part 1, .62. Maintenance and repair: Erie County—Repair contract No. 63, road No. 89, Transit Road, Section 2, towns of Amherst and Clarence; No. 66, No. 88, Transit Road, Section 1, Amherst and Clarence. Monroe County—No. 87, No. 94, Monroe Ave. Road, Brighton and Pittsford. Repair or reconstruction (alternate bids): Repair contract No. 64, road No. 86, Big Tree Road, Erie County, Aurora and Wales.

Bids will be received for the reconstruction of the Big Tree, County Highway No. 86, in Erie County, four miles in length, and alternative bids will also be received for the repair of said road No. 86, the Commission reserving the right to award a contract for either the reconstruction or the repair of said road as in its opinion may be deemed advisable. Proposals for each class of work should be presented on the specifications and bidding sheets prepared therefor, and if the bid is made for the repair of the road, the envelope in which it is contained, should be endorsed "Repair Contract No. 64, Erie County." If proposal is for reconstruction the envelope should be endorsed "County Highway No. 86-R, Erie County." For further details see advertisement in this issue.

WEST NEW YORK, N. J.—We are officially advised that contract for brick paving and setting curbstones has been awarded by the Town Council to the THIEL CONSTRUCTION CO., at 92% of standard cost. Estimated cost, $15,600. Bids were opened on June 21. Carl Griesbach is City Engr.

ELIZABETH, N. J.—Bids will be received by the City Council until 8.30 p. m., July 15, for repaving with brick Madison Ave., from East Jersey to East Grand Sts. N. K. Thompson is St. Comr.

*WILLIAMSPORT, PA.—Bids will be received by the Highway and Sewer Committee of the Councils of the city of Williamsport, and the Supervisors of Loyalsock Township, Lycoming County, Pa., at the City Clerk's office, City Hall, Williamsport, until noon, July 20, for paving with vitrified paving brick, laid upon a concrete foundation, Market St., between the north side of Rural Ave. and the northern line of the city, from curb line to curb line, less right-of-way of the Vallamont Traction Co., the city to pay for that part of said paving east of the center line of said street and the Township of Loyalsock to pay for that port of the paving west of the center line of said street. The number of square yards to be paved for the city being approximately 1,760, and the number of square yards for the Township being approximately 1,760. Separate bids shall be submitted to the city and the Township of Loyalsock for their respective shares. John B. Atto is City Engr., Williamsport. Joseph G. Rider is Secy.-Treas., Supervisors, Loyalsock Township.

*POTTSVILLE, PA.—We are officially advised that bids were received as follows by the Town Council on June 28, for grading, curbing, paving and improving Center, Railroad and connecting streets in the Borough of Pottsville: E. H. VARE, Philadelphia, for 3½-in. wood block, $67,605 (awarded contract); Thomas C. Reese, $76,111; Coryell Construction Co., $74,326; Monroe Paving Co., $73,369; R. W. Heuson, $73,329; Jersey Paving Corporation, $67,379 (but on different block). William S. Pugh is Engr. and Comr. of Highways, Morris Bldg., Pottsville.

INGRAM (Allegheny post-office), PA.—We are officially advised that bids were received on July 7 by D. H. Hainer, Boro. Clk., for paving Chester Ave., from Hodgson Ave. to Chapman St., and Center Ave., from Short St. to Dallas Ave. Contract has been awarded to the SANDERS PAVING & CONSTRUCTION CO., Frick Bldg., Pittsburg, at $4,343.

SHENANDOAH, PA.—We are officially advised that bids were received by the Town Council of the Borough of Shenandoah on July 7, for paving West Coal St., from Main St. to West St., and White St., from Centre to Oak Sts., with vitrified paving blocks on a 6-in. concrete base, and for furnishing and setting new curb and resetting old curb. Contract has been awarded to JOHN LEFFLER, of Hazelton, Pa., at $2.19 per sq. yd. Estimated cost, $6,000. John M. Schaeffer is Chn. of Roads and Highway Com.

WILKES-BARRE, PA.—We are officially advised that W. T. HUTCHINS & CO., of Wyoming, Pa., have been awarded contract for the improvement of 3,400 ft. of Northampton St., Wilkes-Barre Township, at $29,300. They were the lowest bidders with Glutrin binder. The work is under the direction of Gilbert G. Jacobosky, C. E., Engr. for the Comrs.

WASHINGTON, D. C.—The following bids were received on July 9 at the office of the District Commissioners for laying sheet asphalt for the fiscal year ending June, 1911: Barber Asphalt Paving Co., Philadelphia, $1.80; vitrified brick gutters, $1.45; Cranford Paving Co., Washington, D. C., $1.77; vitrified brick gutters, $1.40.

The following bid was received on July 9 at the office of the District Commissioners for furnishing asphalt blocks for the fiscal year ending June, 1911: Washington Asphalt Block & Tile Co., Washington, 4-in., $1.65.

LOCHAVEN, VA.—Arthur C. Freeman, Arcade Bldg., Norfolk, Consulting Engr. for the American Boulevard Corporation, has awarded to E. F. MITCHELL, contractor. Grading contract for the streets of Lochaven, a suburb of Norfolk. Contract amounts to 15,000 yds. of excavation. Curb and sidewalks will be let later.

*HUNTINGTON, W. VA.—Bids will be received by the Board of Commissioners until 1 p. m., July 25, for grading, draining, curbing and paving with vitrified brick portions of several streets. John Coon is Comr. of Streets. For details see advertisement in this issue.

CHARLESTON, S. C.—The following bids were received at the Bureau of Yards and Docks, Navy Department, Washington, for gravel paving at the U. S. navy yard, Charleston: Simon Mayrant Co., Charleston, S. C., Item 1, $1,771; Item 2, 58 cts.; Item 3, 57 cts. P. D. Hay, Charleston, S. C., $1,843, 65 cts., and 65 cts.

COLUMBUS, GA.—See item under Light and Power Plants.

FORT PAYNE, ALA.—On July 1, the town awarded contract to MORRIS & ANGEL, of Sheffield, Ala., for 850 sq. yds. concrete sidewalls, at 99 cts. per sq. yd.; 100 sq. yds. concrete driveway at $1.40 per sq. yd.; 1,065 lin. ft. of 6-in. curb, at 30 cts. per lin. ft. Willburn Hill is Engr., Gadsden, Ala.

TUPELO, MISS.—We are officially advised that bids were received by the Third District of Lee County on July 6 for 20 miles of road construction. Contract has been awarded to the GOOD ROADS CONSTRUCTION CO., 44 Byrd Bldg., Memphis, Tenn. D. W. Robins, of Tupelo, is Secy. of Comn.

KNOXVILLE, TENN.—Bids are asked until 2 p. m., July 19, for 20,000 yds. of concrete paving and 15,000 ft. of combined curb and gutter. Hall & Adams are Engrs, Centerville, Iowa.

CYNTHIANA, KY.—Bids will be received by the Committee, appointed by the Harrison County Fiscal Court, until noon, July 16, for the construction of 1.58 miles of turnpike road. Plans, etc., at the office of R. Earl Magee, of Committee. Frank Jameson is Chn. Com.

WELLINGTON, OHIO.—Bids will be received by J. B. Murray, Village Clk., until noon, July 15, for grading, draining, curbing and paving with brick North and East Main St.

COLUMBUS, OHIO.—The City Council has adopted a resolution declaring it necessary to improve Stone Ave., from Nicholas St. to 18th St., by paving and curbing. It was also declared necessary to build artificial stone sidewalks on both sides of Eureka Ave., from Broad St. to Steele Ave., and on both sides of West Park Ave., from Rich St. to Sullivant Ave.

BRYAN, OHIO.—Bids will be received by the Board of County Commissioners of Williams County until July 26 for grading and macadamizing a road 1.55 miles long in Jefferson Township. Estimated cost, $9,968. The work is under the supervision of the State Highway Department, Columbus, where plans and specifications have been filed.

PAINESVILLE, OHIO.—Bids will be received by the County Commissioners of Lake County until July 19 for grading and macadamizing a road 1.08 miles long in Concord Township. Estimated cost, $6,411. The plans for the work are on file with J. C. Wonders, State Highway Comr., Columbus.

ASHLAND, OHIO.—Bids will be received at the office of the County Commissioners until July 20, for grading and macadamizing a road two miles in length in Greene Township, under the provisions of the State Aid Law. Estimated cost, $12,977.

POMEROY, OHIO.—Bids will be received by the Board of County Commissioners of Meigs County until July 19 for grading and paving with brick, a highway one mile in length in Salisbury Township. Estimated cost, $10,794. The work is being done under the supervision of the State Highway Department, J. C. Wonders, Comr., Columbus.

XENIA, OHIO.—Bids will be received by the Board of County Commissioners until July 21 for grading and macadamizing a road 1.06 miles long in Xenia Township; a road .89 mile long in New Jasper Township and a road one mile long in Xenia Township. Estimated cost, $4,408, $2,611 and $3,103, respectively. All the work is under the supervision of the State Highway Department. J. C. Wonders is Comr., Columbus.

DEFIANCE, OHIO.—Bids will be received by the Board of County Commissioners of Defiance County until July 27 for grading and macadamizing a road one mile long in Noble Township under the direction of the State Highway Department. Estimated cost, $5,167.

BELMONT, OHIO.—JOHN SCHANNFELT, of Martins Ferry, Ohio, has been awarded the contract for paving one of the principal streets of Belmont, at $12,500.

PORTSMOUTH, OHIO.—Bids for the paving of Hutchins St., from Gallia to Home Sts., were opened at the office of the City Clerk on July 1 as follows: J. A. Grimes, Portsmouth, Carlyle brick, $14,623; S. Monroe & Son, Portsmouth, Carlyle, $13,608; Kaps Bros., Portsmouth block, $12,725; Kelly Bros., Peebles block, $12,694.

MANSFIELD, OHIO.—We are officially advised that contract has been awarded by the State Highway Department, Columbus, for State Highway D, Petition No. 237, Richland County, Plymouth and Shiloh Road, to CARROLL & GRUBER, of Caledonia, Ohio, at $18,167. Bids were opened on July 6.

WOOSTER, OHIO.—We are officially advised that contract has been awarded to L. WILDESON, Orrville, Ohio, at $12,650, by the State Highway Department, Columbus, for State Highway D, Wayne County, Petition No. 230, Creston and Jackson Road. Other bids were: D. A. Ph[illegible] Ashland, Ohio, $12,872; Lee & Grigg[illegible], [illegible]rsburg, Ohio, $12,725. Contract wa[illegible] for Wooster block. L Wildeson s[illegible] a bid for $13,172 for Minerva bloc[illegible] were opened on July 8.

FINDLAY, OHIO.—We are [illegible] advised that bids were received [illegible] by the Board of County Comm[illegible] for constructing five miles of stone [illegible] Delaware Township. Contract has [illegible] awarded to the HANCOCK STONE CO., [illegible] at $16,890. Frank C. Shank is [illegible] Audr.

CANTON, OHIO.—We are offi[illegible] that bids were received on Ju[illegible] the office of the Commissioners of S[illegible] at Canton, for grading, draining [illegible] with brick a mile of road [illegible] Township. Contract has been [illegible] to W. H. VOGT & SONS, of Ma[illegible] Ohio, at $16,598. J. H. McConnell is [illegible] Audr.

WASHINGTON, IND.—We are [illegible] ally advised that bids were received [illegible] Thomas Nugent, Audr., Daviess County, [illegible] July 5, for the construction of a gravel [illegible] known as the Meredith Road. Contract [illegible] been awarded to JEAN & SNYDER, [illegible] burg, Ind., at $3,680.

RUSHVILLE, IND.—ADAMS [illegible] of Zanesville, Ohio, have been aw[illegible] contract for building three brick stre[illegible] this city.

PRINCETON, IND.—Plans have [illegible] ordered on which bids will soon be [illegible] for paving a number of streets with brick. Estimated cost, $55,000.

BEACH GROVE, IND.—The Town Board is asking for bids for paving Alton St., 2[illegible] ft. in width, with crushed stone or bitulithic, cement curb and gutter combined, and 5-ft. cement sidewalks. E. C. Martin is [illegible]

INDIANAPOLIS, IND.—The Board of Public Works has let contracts as follows: Linwood Ave., from Washington to New St., asphalt roadway and combined curb and gutter, to HOOSIER CONSTRUCTION CO., at $3.23 per lin. ft.; local sewer in Cottage Ave., from Barth to Wright Sts., to BOSERT & CO.

The Board of Public Works has passed resolutions for paving with asphalt or wooden block and paving the sidewalks with cement, the following streets: Iowa St., from East to Meridian Sts.; first alley north of McCarty St., from New Jersey to East St., with wooden blocks.

INDIANA.—Bids for the construction of gravel and macadamized roads in Indiana will be received as follows:

Aug. 1, 10 a. m., by Commissioners of Jennings County, at Vernon, Ind., for the construction of 2½ miles of gravel road in Campbell Township. T. L. Thomas is Audr.

Aug 2, at 10 a. m., by Commissioners of Knox County, Vincennes, Ind., for the construction of a gravel road in Vincennes Township. Length of road, 4,914 ft. John T. Scott is Audr.

Aug. 2, at 2 p. m., by Commissioners of Grant County at Marion, Ind., for the construction of a gravel road in Franklin Township. Andrew G. Stout is Audr.

Aug. 2, at 2 p. m., by Commissioners of Morgan County, at Martinsville, Ind., for the construction of gravel roads in Greene and Gregg Townships. B. E. Thornburg is Audr.

EAST CHICAGO, IND.—Bids will be received by the city until Aug. 5 for improving Alexander, Northcote, Forsyth, Olcott and Melville Aves. Estimated costs $43,571, $27,533, $49,921, $31,385 and $43,571, respectively. Bids are also asked for 20 miles of cement sidewalk. C. K. Wallace is City Engr.

MARION, IND.—The Commissioners of Grant County have let a contract to J. A. HARDING, of Pendleton, Ind., for the construction of 2¼ miles of stone road in Fairmont Township, at $4,997.

PRINCETON, IND.—The Commissioners of Gibson County have let contracts for the construction of nine gravel roads as follows: Three roads to HAWKINS BROS., of Brazil, Ind., at $20,000; four roads to TRIBBLE & HAWKINS, of Brazil, at $40,000; and two roads to CAMPBELL & CRABB, of Brazil, at $8,000.

BLOOMINGTON, IND.—The County Commissioners of Monroe County have awarded contract to CAMPBELL & DOBSON, of Bloomington, for a gravel road in Washington Township, at $5,489. Horace Blakeley is Audr.

LEBANON, IND.—We are officially advised that the County Commissioners of Boone County have awarded contracts for road work as follows: For Oren O. Smith Road, Eagle Township, to JAMES M. LITTLE, of Indianapolis, at $5,231; for Arthur McCoy Road in Harrison Township, to SHOHAN & McCARTHY, of Lebanon, at $9,400. B. F. Herdrick is Audr.

MUNCIE, IND.—We are officially advised that the Commissioners of Delaware County received bids on July 6 for the construction of a crushed stone road, known as the Smith road in Center Township. Contract has been awarded to GEORGE SAUNDERS, of Muncie, at $25,300. Joseph E. Davis is County Audr.

FRANKFORT, IND.—Bids are asked by the Commissioners of Clinton County until Aug. 6 for the construction of 15 gravel roads. We are advised that the date originally set, July 9, was due to a mistake in advertising the work. C. F. Cromwell is County Audr.

WARSAW, IND.—Plans have been ordered from which bids will be asked for paving of 3½ miles of streets here.

WABASH, IND.—We are officially advised that the Commissioners of Wabash County have awarded contract to MADDEN BROS., of Marion, Ind., for the construction of a gravel road in Lagro Township, at $8,500. Bids were opened on July 5. J. P. Noftzer is County Audr.

PAOLI, IND.—We are officially advised that bids were received by the Commissioners of Orange County on July 5 for the con-

struction of the following macadamized roads: Road No. 1, Orangeville and West Baden Road in Orangeville Township, 15,634 ft. in length, and Road No. 1, the Beech Grove Road in Paoli Township, 9,890 ft. in length. Contract for Beech Grove Road was awarded to O. P. TURLEY, of Orleans, Ind. No bids were received for the Orangeville and West Baden Road. Alvin B. Ham is County Audr.

DETROIT, MICH.—The Department of Public Works, J. J. Haarer, Comr., has awarded the following contracts for paving streets: To T. E. CURRIE, Penobscot Bldg., Larned St., with creosoted blocks; estimated cost, $3,559; Napoleon St., with brick, $6,575; Waterloo St., $1,336, and Winder St., $8,58?, both with brick, to W. W. HATCH & SON, Penobscot Bldg.; Mack Ave., with brick, estimated cost $6,649, to JAMES HANLEY, Penobscot Bldg., Maple St. with brick, $3,330, on concrete foundations, with Medina, Borea or other approved curbing.

DOWNERS GROVE, ILL.—Bids will be received by the Board of Local Improvements until July 19 for grading, draining, paving and otherwise improving Grove St. and Forest Ave.

DECATUR, ILL.—Bids will be received by Alfred Beach, City Clk., until Aug. 1 for 7,975 sq. yds. of vitrified block paving on 4-in. concrete base on Marietta St. Estimated cost, $18,156. A. B. Alexander is City Engr.

WATSEKA, ILL.—Bids will be received by Perry A. Sprague, City Clk., about July 25, for 1½ miles of tarvia bound macadam road on Third St. G. C. Houston is City Engr.

SIDELL, ILL.—Bids will be received by W. E. Cathcart, Pres. Bd. Local Improvements, until July 25, for improving several streets. Estimated cost, $30,000.

WAUSAU, WIS.—Bids will be received by the Board of Public Works until 4 p. m., July 20, for repaving Third St. with creosote wood blocks, about 9,000 yds. John F. Lamont is Chn.

SPARTA, WIS.—Bids will be received by the City Clerk until 2 p. m., July 23, for improving streets. H. Conger is Chn. St. Com.

RACINE, WIS.—Bids will be received by the Board of Public Works, at the office of the City Clerk, until 10 a. m., July 23, for paving Park Ave., from Sixth to 14th Sts., approximately 15,200 sq. yds. of asphalt pavement and 7,746 lin. ft. combined curb and gutter. P. H. Connolly is Chn.

*ANTIGO, WIS.—Bids will be received by G. O. Palmiter, City Clk., until 2 p. m., Aug. 6, for furnishing material and doing all work necessary for paving four city blocks with macadam pavement. Plans and specifications are now on file in City Clerk's office.

SHENANDOAH, IOWA.—Bids will be received by C. M. Conway, City Clk., until noon, July 16, for constructing native brick, vitrified brick or cement sidewalks.

ST. PAUL, MINN.—The Board of Public Works will receive bids until July 21 for paving Dayton Ave., between Summit Ave. and Avon St. Asphalt, creosoted blocks, or vitrified brick will be used. Estimated cost, $20,000. R. L. Gorman is Clk.; L. W. Rundlett is City Engr.

EXCELSIOR, MINN.—Bids will be received by Hugh R. Scott, Audr. of Hennepin County, Minneapolis, until 11 a. m., July 18, for graveling road No. 3 in Excelsior.

FORT MISSOULA, MONT.—Bids in triplicate will be received by A. B. Shattuck, Constr. Q. M., U. S. A., until 9 a. m., July 30, for the construction of concrete sidewalks and curbs.

ST. LOUIS, MO.—Bids will be received by the Board of Public Improvements until noon, July 15, for improving 28 sections of streets. Estimated cost, $373,000. W. B. Dryden is Secy.

ST. LOUIS, MO.—Bids were opened on June 21 as follows by the Board of Local Improvements for reconstructing Rauschenbach Ave.: James E. Perkman, $21,292; G. Eyermann & Bro., St. Louis, $20,961; Skranka Contracting Co., $22,841; Harry F. Heman, $21,562; The Parker-Washington Co., $21,076; Granite Bituminous Paving Co., $21,940. W. B. Dryden is Secy.

ST. JOSEPH, MO.—The Board of Public Works on June 23, awarded contract, it is reported, for 7,278 sq. yds. of Hassam paving on Highland Ave. to RACKLIFFE & GIBSON, at $1.45 per sq. yd., and 5,996 sq. yds. on Calhoun St. to METROPOLITAN PAVING CO., at $1.75 per sq. yd.

CAPE GIRARDEAU, MO.—Bids will be received until July 18 by Chris. F. Betten, City Clk., for grading and paving with creosoted wood block between the tracks and with vitrified brick outside of the tracks on Broadway, in all about 1,260 cu. yds. excavation, 1,392 sq. yds. wooden block and 6,168 sq. yds. vitrified brick; also macadamizing with bituminous binder Independence, West End Boulevard and Whitener Sts., in all about 6,217 cu. yds. excavation, 3,423 cu. yds. embankment, 8,085 lin. ft. granitoid curbing and guttering, 5,298 cu. yds. crushed rock to be placed, asphaltum or bituminous binder for 9,897 sq. yds. rolling subgrade and macadam, the latter two times on twelve blocks.

VALLEJO, CAL.—We are officially advised that the city proposes to pave various streets. E. P. Noyes is City Engr.

AGUSA, CAL.—The city has ordered the improvement of ten streets, by grading, paving, curbing and two culverts thereon. Bids will be asked for soon.

HUNTINGTON BEACH, CAL.—The city has ordered the construction of a cement sidewalk and cement curbs on both sides of Olive St., Ninth St. and Walnut Ave.

TROPICO, CAL.—S. Omar, E. W. and Bert W. Richardson, of Tropico, have awarded contract to FRED. R. SINCLAIR, of Glendale, for grading, oiling and constructing cement curbs and sidewalks on Central Ave., El Bonito Ave., Cerritos Ave., Mira Loma Ave., and Gardena Ave., Brand Boulevard, San Fernando Road, at 22.1 cts. per lin. ft. for curbs; 77.5 cts. per sq. ft. for sidewalks; 17.5 cts. per sq. ft. for oiling, and for grading 8 cts. to 60 cts.

HERMOSA BEACH, CAL.—A cement walk, 22 ft. wide and 2¼ miles long, to extend along the Strand, is contemplated by the City Trustees.

LOS ANGELES, CAL.—The Board of Public Works has awarded contract to the BARBER ASPHALT PAVING CO., Henne Bldg., for improving Seaton St., at $10,259.

OCEAN PARK, CAL.—The Trustees will soon ask for bids for the construction of two storm water catch basins on the speedway, and also for the grading of Park Pl. with an 8-ft. cement walk thereon; for the grading of Vista Pl. with an 8-ft. cement walk, and for the grading and paving of Indiana Ave. with cement curbs, two concrete culverts, two vitrified pipe culverts, three concrete bulkheads and manholes, etc. George Beemer is City Clk.

ELY, NEV.—Bids will be received by the Board of County Commissioners at Ely, until July 28 for the construction of 6,250 ft. of macadam and asphalt highway from Osceola to Snake Valley. F. D. Oldfield is County Clk.

TROIS RIVIERES, QUE.—We are officially advised that the city proposes to construct a boulevard. F. Parent is Supt. of Paving.

MANUFACTURING PLANTS.

*(*Denotes that this work is advertised in Engineering News.)*

MEXICO, ME.—The Maine Wood Reduction Co. has completed plans and will soon commence building its proposed plant in Mexico, about seven miles from Rumford. The plant will be in the midst of a district exceedingly rich in hardwoods, and close to the Maine Central Railroad, which passes through the property. The company intends at first to manufacture only alcohol, charcoal, acetate of lime and tar, but later will manufacture chemical by-products, including methylene, acetic acid, acetone, chloroform iodoform, creosote, enaiacol, formaldehye, creosol, vaniline, etc.

SHELBURNE, VT.—The Champlain Transportation Co. will begin soon the construction of shops at the ship yards at Shelburne Harbor, to replace the building destroyed by fire last winter. Instead of the construction of four or five buildings, as were in use before the fire, it is planned to erect one long building which will contain the carpenter and paint shops, saw mill and other departmental work. Carpenters are now employed in repairing the dock at Thompson's Point after which a force will start on the buildings at the Shelburne Harbor.

SPRINGFIELD, MASS.—FRED T. LEY & CO., of Springfield, have been awarded the contract to erect the new factory building for the Bausch Machine Tool Co., at Springfield, Mass. Samuel M. Green, Inc., are Archs., 318 Main St. The building is to be of brick, three stories, 50 × 93 ft., and will have tar and gravel roof and steam heat.

NEW BEDFORD, MASS.—The contract for the building of the Sharp mill at the northeast corner of Rockdale Ave. and Dartmouth St., New Bedford, Mass., has been awarded to the J. J. PRINDIVILLE CO., of South Framingham, Mass., who were low bidders. The ground will be broken for the new mill buildings at once. The mill, including the boiler house, will have a surface area of about 520,000 sq. ft., which makes about twelve acres of floor space. The main mill building will be about 565 ft. long and 136 ft. wide. It will be five stories high and will have a large saw tooth roof. The engine room is 122 × 160 ft., and there will be two beds for cross compound engines. The boiler room will be 164 × 141 ft., and 50 ft. high, giving place for 14 boilers. Besides the main mill and the boiler and engine rooms there will be a storehouse which will be three stories high and will be 70 × 316 ft. C. R. Makepeace, of Providence, R. I., is Engr.

PAWTUCKET, R. I.—It is reported that the American Textile Co., Pawtucket, R. I., is to have an addition built to their plant large enough to employ about 300 more hands. It is expected to have the enlargement completed in about three months.

NEW LONDON, CONN.—The Brainard & Armstrong Co., of New London, Conn., manufacturers of silk products, has filed a certificate of its action in increasing its capital stock from $140,000 to $300,000. The new issue will enable the company to carry on various contemplated plans.

NEW BRITAIN, CONN.—The North & Judd Mfg. Co., of New Britain, will erect two factory additions. An addition, 70 × 94 ft., will be made to the annealing department and an addition to the brass foundry will be 60 × 105 ft. The BERLIN CONSTRUCTION CO., of Berlin, Conn., has been awarded the contract for the steel work.

PLANTSVILLE, CONN.—The factory of the George E. Wood Tool Co., in Plantsville, Conn., is to be enlarged at once.

JAMESTOWN, N. Y.—The Interior Metal Mfg. Co. has just been incorporated with the Secretary of State for $50,000. The directors are Gustaf Carlson, Oscar C. Carlson, Charles A. Chindgren, Oscar Eckholm, Otto A. Nelson, F. August Rosenquist and Charles J. Swanson, all of Jamestown. The company will equip a factory and commence the manufacture of metal furniture in East Jamestown.

It is reported that CHARLES SWANSON, of Jamestown, has been awarded the contract to erect a 5-story, 125 × 60-ft., brick factory on Taylor St., for Watson Mfg. Co., of Jamestown, N. Y.

LOCKPORT, N. Y.—The DUROLITHIC CO., 460 Ellicott Sq., Buffalo, N. Y., have been awarded contract to build the plant of Simonds Mfg. Co., at Lockport, N. Y., consisting of gas producer house, 30 × 325 ft., one story and basement; melting shop, 80 × 325 ft.; building No. 1, 110 × 325 ft., and buildings Nos. 2 and 3, each 60 × 120 ft., to be constructed of concrete, steel and brick with reinforced tile roofs, metal sash, rolling steel doors, sheet metal louvers; also an office building 45 × 85 ft., two stories high of reinforced concrete, face brick, stone trimmings, plate glass, ornamental iron stairs, oak interior finish. Martin C. Schwab is Consult. Engr., 161 State St., Chicago, Ill.

LYONS, N. Y.—The Safferson & Weisburg Co., 145 Green St., New York, has let a contract to SCHREIBER & BRAMER, of this village, to construct a factory building to be completed by Sept. 1. The building is to be 50 × 150 ft., with an annex, 20 × 20 ft., all to be two stories high and built of brick. The factory is to be on Geneva St. on the vacant lot known as the Ellen C. Adam lot, about 85 ft. north of Forgham St.

NEW YORK, N. Y.—Albert Kahn and E. Wilby, Trussed Concrete Bldg., Detroit, Mich., are preparing plans for an automobile factory, three stories and basement, 224 × 75 ft., for the Ford Motor Car Co., of Detroit. The building is to be located at Long Island City, N. Y. Brick, terra cotta, Barret roof, copper flashing, structural steel and iron, ornamental iron, mosaic tiling, cement floors will be used. Cost, $60,000.

PATERSON, N. J.—Plans for an addition have been drawn for W. F. Taubel, operating the Popular Hosiery Mills at Riverside. A mill, 50 × 50 ft., four stories high, is proposed. Work on the structure, which will be of brick construction, will be commenced at once. The above mills were incorporated in 1909 to manufacture cotton, worsted and lisle hosiery. The plant is equipped with 700 knitting, 700 ribbing and 10 sewing machines, employment being given to 1,000 operatives.

PHILADELPHIA, PA.—CHARLES W. DENNY, 1330 Arch St., has a contract to build a 2-story addition, 50 × 77 ft., to the plant of Sibson & Stern, Inc., at Stenton Ave. and Wyoming St. The cost will be $15,000.

NEWARK, DEL.—The A. Jedal Co., manufacturers of fireworks, novelties, whose plant was burned several weeks ago, is planning to rebuild on a larger scale. The William J. Barnard farm on Depot Road, leading to Cooch's Bridge, has been purchased and the plant will be built upon it. The shops will be near the stream of water that runs through the farm and which will be used for water power. The new plant will give employment to more than 200 persons and the company will build homes for the employees.

RICHMOND, VA.—Plans have been filed with the Building Inspector by the Virginia Railway & Power Co. for two brick, steel and concrete street car barns, to be erected between Cary, Taylor, Elm and Strawberry Sts. The buildings are to cost about $50,000. C. B. Buchanan, Richmond, is Gen. Supt.

GRAFTON, W. VA.—The Grafton Traction Co., during the summer, will build a brick car house in Grafton. George L. Hartley is Gen. Mgr.

SHREVEPORT, LA.—The Alamo-Caddo Oil & Refining Co. will erect an oil refinery at Shreveport, at a cost of more than $170,000. P. A. Cooney, now operating a refinery at New Orleans, La., is one of the promoters.

ASHTABULA, OHIO.—Albert Kahn and E. Wilby, Archs., Trussed Concrete Bldg., Detroit, Mich., are receiving figures on a factory plant of six separate 1-story buildings, 150 × 300 ft., 140 × 160 ft., 350 × 50 ft., 60 × 90 ft., for the Great Lakes Engineering Works of Ashtabula, Ohio. The buildings are to be of stock brick, steel frame, reinforced concrete, with composition roofing and electric fixtures. Cost of plant, about $200,000.

CLYDE, OHIO.—The General Motors Co., which owns the Elmore automobile factory at Clyde, has decided to make improvements to the plant. A machinery building is to be erected whose dimensions are 200 × 250 ft. When the entire improvement is completed the main factory building will be 660 ft. long with plans for extension to 300 ft.

CLEVELAND, OHIO.—Building Inspector Marani has granted a permit to the Standard Welding Co. for the erection of a $75,000 factory at Woodview Ave. and West 76th St.

RICHMOND, IND.—The Richmond Underwear Co. has purchased a site upon which to build a $60,000 factory building.

EVANSVILLE, IND.—The Smalls Grain Elevator Co. announces that it will rebuild the large elevator recently burned down on the West Side. The new building will cost upwards of $50,000.

FORT WAYNE, IND.—Plans and specifications have been completed and sent to contractors, for the $1,000,000 office and factory buildings to be erected by the Fort Wayne Electric Works on Broadway this summer. When completed the buildings will give employment to 1,000 additional workmen. Both buildings will be of modern factory and office construction, fireproof. The improvements consist of two buildings on the entire east side of Broadway from the Pennsylvania R. R. to McCulloch Park. The office building will have a front on Broadway, next to McCulloch Park, of 60 ft. and will be five stories, or 76 ft. in height. It will have a depth of 140 ft. back and a floor space of 50,000 sq. ft. It will be equipped with offices for all the company's officials and heads of departments. The factory building will have a front of 229 ft. on Broadway and will be 140 ft. wide and 76 ft. high. It will be equipped with four floors and will have a total floor space of 125,000 sq. ft. Surmounting the factory building will be two water towers, each 100 ft. high and having a capacity of 50,000 gallons. The new buildings will be of steel reinforced concrete construction on concrete foundation.

GRAND RAPIDS, MICH.—The Imperial Furniture Co., F. Stewart Foote, Mgr., is having plans prepared for a 4-story and basement factory, 60 × 180 ft. Cost, $40,000.

BAY CITY, MICH.—Albert Kahn and E. Wilby, Archs., Trussed Concrete Bldg., Detroit, Mich., are preparing plans for a 12-story building, 65 × 104 ft., for the Industrial Works, of Bay City, Mich. Stock brick, Kahn reinforced concrete, composition roof, hardwood finish and floors and electric fixtures will be used in construction.

DETROIT, MICH.—G. A. Muellar, Breitmeyer Bldg., has let the following contracts for the proposed enameling building, 178 × 233 ft., and woodworking building, 64 × 269 ft., for the Glass Enameled Package Co., Henry C. Wiedeman, Pres., 948 Beaubien St.: structural iron work to WHITEHEAD & KALES, Beecher Ave. and M. C. R. R., and masonry to THOMAS SCHEICH & SON, 12 Jay St.

Albert Kahn and E. Wilby, Trussed Concrete Bldg., have let the masonry contract for the 4-story and basement cigar factory, 96 × 100 ft., for Oscar Rosenberger, 134 Lathrop Ave., to PUTNAM & MOORE, 733 Wabash Ave. Cost, $35,000.

Baxter & O'Dell, 1024 Hammond Bldg., have let the general contract to ROY HABERKORN, 169 Seward Ave., for the erection of a 4-story automobile factory, 310 × 70 ft., for the E. M. F. Auto Co.; cost, $125,000; also for third and fourth-story addition, 80 × 264 ft., at $20,000.

C. Howard Crane, Ford Bldg., has let the following contracts for a factory for the Morton Baking Co., 67 Cherry St.: Structural iron work to C. AMOS & CO., 9 Orchard St.; reinforced concrete to SCHILLINGER BROS., 364 Illinois Ave.; masonry to MITCHEL & GROBBE; carpentry, to A. HINSCH & SON, 748 Leland St.

WEST ALLIS, WIS.—Contracts have been awarded by the Kempsmith Mfg. Co. for the erection of its plant at 45th Ave. and Rogers St., West Allis. There will be four buildings: Main building, 200 × 250 ft. with wing, 100 × 100 ft., saw-tooth construction; pattern shop, 50 × 90 ft., concrete foundation, and floor, brick walls, main same; power plant, 50 × 100 ft., fireproof; office, 40 × 60 ft., two stories and basement, brick and faced stone. All equipment has been contracted for.

OSHKOSH, WIS.—ANTON NIELSON & SON, of this city, have been awarded the contract for the building to be erected by the E. B. Hayes Machine Co. on Forest Ave., to be of reinforced concrete and brick, 60 × 250 ft., with a wing 30 × 80 ft., steel roof, heating plant.

BELOIT, WIS.—The FREDERICK A. LITTLE ENGINEERING CO., of Fond du Lac, Wis., has the contract for the $30,000 building to be erected by the Gardner Machine Co. in this city. The same firm prepared plans. The building will be of reinforced concrete, 100 × 200 ft., 40 × 100 ft. of which will be two stories. A mercury vapor system to be used for artificial lighting.

MILWAUKEE, WIS.—O. C. Uehling, Arch., Wells Bldg., is preparing plans for a factory and warehouse building for the Phoenix Knitting Co., to be erected in addition to the present plant at Broadway and Chicago St. The building will have six stories, and will be 80 × 120 ft., of reinforced concrete and brick construction, with heating and ventilating systems, electric elevators, sprinkler system. The lower part is to be used as a dye room, the upper portion for manufacturing and the intermediate floors for stock rooms. Cost, $80,000.

GREEN BAY, WIS.—The Storle Valve Mfg. Co., which is to be removed to this city from Kewaunee, Wis., will erect a factory building on a site donated by the Van Dycke Co.

MANITOWOC, WIS.—The William Rahr Sons Co. has purchased property on Washington St., and will erect a brewery as soon as the present buildings can be removed.

MINNEAPOLIS, MINN. — The Russell Grader Co. has bought from Schulman & Garber and the Northern Pacific Ry. Co., a lot, 86 × 312 ft., at University and 23d Ave., and will build.

VANDALIA, MO.—The Mississippi Glass Co., Main and Angelica Sts., St. Louis, has acquired title to 1,000 acres of fine fire clay and will erect here its main fire brick plant.

KANSAS CITY, MO.—The RAYMOND CONCRETE PILE CO., 90 West St., New York, has been awarded the contract for the concrete piles and foundation of the Bemis Bros. Bag Co.'s factory at Ninth and Wyoming Sts., Kansas City, Mo. The C. L. GRAY CONSTRUCTION CO., Victoria Bldg., St. Louis, are the general contractors.

YOAKUM, TEX.—The San Anonio & Aransas Pass R. R. will erect two shop buildings at Yoakum and install about $30,000 worth of machinery.

WEIMAR, TEX.—J. O. Boettcher is organizing a company here to erect an ice and cold storage plant. About $10,000 will be invested in the enterprise.

FORT SAM HOUSTON, TEX.—The following awards have been made for ice plant equipment, etc., at Fort Sam Houston, Tex.: BRADEN, O'NEILL PLUMBING & HEATING CO., plumbing, $370; SIGLER BROS., Junction City, Kan., pump and ice plant, $21,162; A. M. LOCKETT & CO., New Orleans, La., boilers, feed water heater, etc., $16,620; HENRY VOGT MACHINE CO., machinery, $10,105.

FORT BAYARD, N. MEX.—J. B. DOWNEY has the contract, at prices noted below, for equipping a cold storage and power plant at Fort Bayard, N. Mex.: boiler and boiler room equipment, $17,000; engine and generators, $9,500; switchboard, $3,500; remodeling distributing system, $2,450; Tungsten street lighting system, $1,400; meters, $1,000. The refrigerating plant will be installed by the CREAMERY PACKAGE MFG. CO., 184 Kinzie St., Chicago, Ill., at $15,000.

LONG BEACH, CAL.—The Los Angeles Malleable Iron & Steel Co. has secured a 5-acre site at Long Beach for the erection

of a factory building, 200 x 150 ft., and an office building, 40 x 150 ft.

The Pacific Electric R. R. Co. will construct a factory building here, on Ocean Ave., for the manufacture of rolling stock.

WINNIPEG, MAN.—The National Transcontinental Ry. Commissioners, at Ottawa, Ont., have awarded the following contracts for equipment for the proposed railway shops here: MORGAN ENGINEERING CO., of Alliance, Ohio, one 140-ton electric traveling crane; MUSSELS, LTD., Montreal, eleven electric cranes; GEORGE ANDERSON & CO., Montreal, one 5-ton grey iron foundry crane; five hand power traveling cranes, and 15 (gib) cranes; the WHITING FOUNDRY EQUIPMENT CO., of Harvey, Ill., 20 foundry equipment cranes.

CIUDAD JUAREZ, MEXICO.—A cement plant is to be built at Ciudad Juarez. The plant will cost $5,000,000, and will have a capacity of 2,000 bbls. of cement per day. The materials from which the cement is to be manufactured will be mined at Juarez. Contracts for the erection of the plant have been awarded to the FREEBORN ENGINEERING & CONSTRUCTION CO., Scarritt Bldg., Kansas City, Mo., and work will begin immediately.

MISCELLANEOUS CONTRACTS.

(** denotes that this work is advertised in Engineering News.*)

U. S. RECLAMATION SERVICE.—All news concerning canal and irrigation projects, etc., will be found under Water Supply—Irrigation.

PAVING CEMENT, GRAVEL.—New York, N. Y.—See item under Streets and Roads.

DITCH.—Greenfield, Ind.—James A. Cleary, Supt. of Drains, will receive bids until 2 p. m., Aug. 5, for the construction of a ditch several miles in length.

*STEAM SHOVEL.—Schuylerville, N. Y.—Wanted address of steam shovel contractors who have idle plant for about 150,000-yd. job. The Central Dredging Co., Schuylerville.

*DREDGING, ETC.—Chicago, Ill.—Bids are asked by Maj. Thomas H. Rees, Corps Engrs., U. S. A., until 10 a. m., Aug. 8, for dredging and rock excavation in Chicago River, Ill.

*HIRE OF DREDGING PLANT.—Detroit, Mich.—Bids are asked until 3 p. m., Aug. 11 by Col. C. McD. Townsend, Corps Engrs., U. S. A., for hire of dredging plant for Detroit River.

*STONE.—Oswego, N. Y.—Bids for stone for Oswego Harbor, N. Y., will be received at the U. S. Engineer Office, Oswego, until 10 a. m., Aug. 8. Information on application. Capt. W. L. Guthrie, Corps, Engrs., U. S. A.

SMOKESTACK.—Ft. Sam Houston, Tex.—Bids will be received until 11 a. m., Aug. 4, by P. W. Guiney, Constructing Q. M., Ft. Sam Houston, for constructing a smokestack 85 ft. high for pumping and ice plant at this post.

WHARF.—Angers, Que.—Contract for the construction of the wharf here has been awarded by the Department of Public Works, Ottawa, Ont., to J. H. and R. H. MURPHY, of Weyburn, Sask. A. R. Decary is Dist. Engr., Quebec.

BRUSH, STONE, ETC.—St. Louis, Mo.—Bids will be received until July 27 by Lieut. C. H. Knight, Corps Engrs., U. S. A., Custom House, St. Louis, for furnishing 30,000 cords of brush, 50,000 cu. yds. of stone and spalls and 10,000 piles.

*REMOVAL OF WRECK. — Wilmington, Del.—Bids are asked by Maj. R. R. Raymond, Corps Engrs., U. S. A., until 11 a. m., July 25, for removal of wreck of steamship "Oakdene," lying sunk in Atlantic Ocean, off the coast of Virginia.

LEVEE.—New Orleans La.—Bids will be received until 11 a. m., Aug. 1, by Maj. H. Burgess, Corps Engrs., U. S. A., U. S. Engr. Office, 3838 St. Charles Ave., New Orleans, for constructing about 334,000 cu. yds. of earthwork in the Lower Tensas Levee District.

REVETMENT.—Memphis, Tenn.—Bids were received on July 1 by Maj. M. L. Walker, Corps Engrs., U. S. A., Mississippi River Comn., Custom House, Memphis, for furnishing brush and poles, 40,000 cords, for revetment work. C. W. Hunter, of Memphis, bid $1.65 per cord.

DREDGING—Ashtabula, Ohio.—The Great Lakes Engineering Co. has awarded contract for lengthening the river and constructing a basin to the Inland Waterways Improvement Co., who have sublet the work to the TWO RIVERS DREDGE & DOCK CO., Two Rivers, Wis.

*DREDGE.—Philadelphia, Pa.—Bids are asked until noon, Aug. 10, at the U. S. Engineer office, 815 Witherspoon Bldg., Philadelphia, for constructing steel twin-screw suction hopper dredge for Southwest Pass, Mississippi River. Address Maj. Herbert Deakyne, Corps Engrs., U. S. A.

DITCH.—Red Lake Falls, Minn.—Bids were received on June 24 by A. A. Latendresse, County Audr., for excavating about 31,554 yds. of ditch No. 46. Estimated cost, $4,-530. Contract was awarded to the NORTH-WESTERN DRAINAGE CO., Thief River Falls, Minn., at 12½ cts. per cu. yd.

WHARF EXTENSION.—Sault Ste. Marie, Ont.—Bids were received on June 20 by Nap. Tessier, Secy. Dept. Public Works, Ottawa, for the construction of an extension to the government wharf at Sault Ste. Marie, District of Algoma, Ont. Contract has been awarded to J. F. BOYD, of Sault Ste. Marie.

CONCRETE DAM.—Wichita, Kan.—Bert C. Wells, City Engr., states that contract for furnishing material and constructing a concrete dam across Little Arkansas River has been awarded to FREEBORN ENGINEERING & CONSTRUCTION CO., Kansas City, Mo., at $24,000. Bids were received on June 27.

CAR FERRY.—Frankfort, Mich.—The Ann Arbor Ry. Co. awarded contract on June 24 to the TOLEDO SHIPBUILDING CO., Front St., Toledo, for a car ferry to cost $400,000. Keel, 330 ft., beam 56 ft. and 21 ft. deep, to be operated between Frankfort and Manitowoc, Wis., and to be delivered in December.

ELECTRIC CONDUIT.—Boston, Mass.—Bids are asked by the Bureau of Yards and Docks, Navy Dept., Washington, D. C., until 11 a. m., July 23, for extensions to underground conduit system for electrical conductors at navy yard, Boston. Specifications are on file at the office of Engineering News, New York.

FILLING.—New York, N. Y.—Bids will be received by the Department of Docks and Ferries until noon, July 20, for the right to dump and fill in behind the bulkhead wall now built, or to be built, on the Gowanus section, between 28th and 31st Sts., South Brooklyn, Boro. of Brooklyn. Calvin Tomkins is Comr.

SUBMARINE BOATS.—Washington, D. C.—Contracts were awarded on June 24 for constructing four submarine boats. The ELECTRIC BOAT CO., 11 Pine St., New York, received the contract for three boats and the LAKE TORPEDO BOAT CO., of Connecticut, the contract for the other. The prices ranged from $432,000 to $479,000.

VAULT.—Washington, D. C.—Bids will be received at the office of James Knox Taylor, Supervising Arch., Treasury Dept., Washington, D. C., until 3 p. m., July 28, for a new vault in the fourth floor of the United States Treasury, Washington, in strict accordance with the drawings and specification, copies of which may be obtained at the office at the discretion of the Supervising Architect.

LEVEE, STONE, ETC.—Vicksburg, Miss.—Bids will be received until noon, July 21, by Capt. Clarke S. Smith, Corps Engrs., U. S. A., Mississippi River Comn., Third Dist., Vicksburg, for about 1,180,000 cu. yds. of levee work in this district, and for furnishing 30,000 cu. yds. of stone, 30,000 cords of willow brush and poles, and for wire and manila rope, silicon bronze wire, wire strand, spikes, cable clips, etc.

COALING STATION, ETC.—Waterville, Conn.—Bids were opened at the office of Chas. H. Preston, Jr., C. E., Waterbury, Conn., on July 2, for the construction of a framed railroad coaling trestle with concrete footings and abutment, coal pockets of heavy timber construction and an office building to be used by John Emons, of Waterville, Conn. Of five bids, the A. Johnstone Building Corporation was the lowest and will be awarded the contract.

*DRAINAGE CANALS.—Osceola, Ark.—Bids will be received until July 26 at the office of the County Court Clerk of Miss. Co., at Osceola, by Willis E. Ayres, Ch. Engr., for the construction of 75 miles of drainage canals, approximately 3,170,000 cu. yds. Plans, profiles and specifications are on file with the County Court Clerk at Osceola, Ark., and at the office of Willis E. Ayres, Consulting and Constructing Engr., Randolph Bldg., Memphis, Tenn.

CONDUITS.—New Britain, Conn.—Contract for the extension of the subway system, approximately 21,000 lin. ft. of conduits and 16,000 ft. of laterals, has been awarded to the SAFETY INSULATED WIRE & CABLE CO., 114 Liberty St., New York, at 61.7 cts. per duct ft. for the conduit and 76 cts. per duct ft. for 3-in. iron lateral connections. The only other bidder was Peter Suzio & Co., of Hartford, at 70 cts. for conduits and 45 cts. for laterals. Bids were opened on July 5.

ROAD OIL, ETC.—New York, N. Y.—Bids are asked by the Park Board until 3 p. m., July 21, for furnishing and delivering 1,000 bbls. of emulsifying road sprinkling oil at Prospect Park and gravel pit, Ocean Parkway, near Ave. P, Boro. of Brooklyn; for furnishing and delivering 1,000 cu. yds. of broken stone of trap rock and 500 cu. yds. of screenings of trap rock for parks, Boro. of the Bronx, and for furnishing and delivering one high-pressure power spraying machine for parks, Boro. of The Bronx.

DREDGING.—Boston, Mass.—Bids were received on July 1 by the Board of Land Commissioners, Frank W. Hodgdon, Ch. Engr., State House, Boston, for dredging the south channel of Mystic River in Boston Harbor. The work to be done is the dredging of about 115,000 cu. yds., scow measurement, of material to make the channel 20 feet deep at mean low water. The bids follow: Bay State Dredging Co., 16 99/100 cts. per cu. yd.; Charles M. Cole, 17 9/10 cts.; EASTERN DREDGING CO., 247 Atlantic Ave., Boston, 14 2/10 cts. (awarded contract); J. P. O'Riorden, 14⅝ cts.; J. S. Packard Dredging Co., 16 4/10 cts.

*CHANNEL IMPROVEMENTS.—Cleveland, Miss.—Bids were received by the Board of Drainage Commissioners, of Bolivar County, Miss., for the improvement of the channel of the Bogue Phalia, on July 5, at the office of Sillers & Owen, Attorney, Cleveland, Miss.; the proposed improvement is nine miles in length, and the construction requires the excavation of approximately 1,-155,000 cu. yds. of earth. The bids follow: R. H. & G. A. McWILLIAM, 9.65 cts. per cu. yd. (awarded contract); Canal Construction Co., 9.97 cts.; Timothy Poohey Dredging Co., 9.98 cts.; O. O. McDonald, 11.79 cts.; American Steel Dredge Works, 12.49 cts.

SEAWALL.—San Francisco, Cal.—Bids were received as follows on June 30 by the Harbor Commissioners for the construction of a seawall in water front of the city, requiring 43,000 tons of rock, 95 tons of structural steel and 6,000 cu. yds. of concrete: Metropolis Construction Co., San Francisco, $144,883; Thomson Bridge Co., San Francisco, $128,000; Cotton Bros., Oakland, $140,-000; MERCER-FRASER CONSTRUCTION CO., 1525 Mission St., San Francisco, $119,-400 (awarded contract); Burrell Construction Co., Oakland, $127,000; Associated Construction Co., San Francisco, $124,000; Mervy-Elwell Co., Oakland, $122,000; Western Bridge & Construction Co., Sacramento, $129,400; Hyde, Hayes & Co., San Francisco, $129,000. Carl Uhlig is Asst. Engr., Comrs.

ment of 3,386 soldiers, together [illegible] an appropriate inscription in large[illegible] setting forth the fact that the sa[illegible] erected with a view to properly mar[illegible] resting place of the officers and men [illegible] the Confederate army and navy, who [illegible] as prisoners of war at Point Lookout [illegible] 186[illegible] and 1865.

CONTRACT PRIC[illegible]

(** denotes that this work is a[illegible] in Engineering News.*)

SURFACE DRAIN.—Boston, [illegible] ass.—The Metropolitan Water and Sewerag[illegible] oard received bids June 15 for constru[illegible] about 6,000 ft. open channel, 3,450 ft. [illegible] 33-in. concrete drain, 960 ft. 24-in. v[illegible] d clay pipe drain, etc., in Framingham[illegible] k and Wayland. The bidders were: [illegible] The HENRY SPINACH CONT. CO., [illegible] rbury, Conn. (awarded contract); (B) [illegible] oleman Brothers, Chelsea, Mass.; (C) [illegible] amola, Boston, Mass.; (D) Andrew M. Cu[illegible] k, Boston, Mass.; (E) John J. Falvey, [illegible] rville, Mass.; (F) Michael M. Russo, Bos[illegible] Mass.; (G) Bruno & Petitti, Boston, M[illegible] The itemized bids were:

	A.	B.	C.	D.	E.	F.	G.
5,800 cu. yds. earth excavation for open channel	$1.10	$0.65	$0.85	$1.20	$0.80	$0.8[illegible]	$0.65
8,100 cu. yds. earth excavation for covered drains	.90	1.00	1.10	.90	1.40	1.40	1.20
3,200 cu. yds. borrowed earth	.30	.45	.32	.75	.40	.40	.40
5 cu. yds. rock excavation	10.00	8.00	10.00	3.00	6.00	5.00	4.00
1,000 cu. yds. concrete masonry	7.00	9.00	9.37	7.75	8.50	8.25	9.50
960 lin. ft. furnishing and laying 24-in. vitrified clay pipe	1.10	1.50	1.20	1.90	1.00	1.3[illegible]	2.00
160 lin. ft. furnishing and laying 18-in. vitrified clay pipe	1.00	1.00	.90	1.20	.60	1.00	1.00
330 lin. ft. furnishing and laying 12-in. vitrified clay pipe	.50	.60	.45	1.00	.40	.50	.75
50,000 ft. spruce lumber in place	33.00	40.00	40.00	45.00	42.00	45.00	50.00
2,900 sq. yds. stone paving	1.50	1.00	.95	.60	.80	.75	1.00
600 cu. yds. gravel for slopes of open channel	1.50	1.50	1.00	1.25	1.50	1.45	1.00
9 manholes	40.00	70.00	55.00	50.00	50.00	55.00	50.00
12 catch basins	55.00	60.00	55.00	30.00	40.00	45.00	50.00
Totals	$30,981	$31,289	$32,238	$32,311	$33,228	$33,486	$33,668

*POWER HOUSE AND DAM.—Idaho Falls, Idaho.—Bids were received June 17 and contracts awarded June 24 for the construction of a hydro-electric plant and pumping station. The bidders were: (A) CHATFIELD & CUTLER CONSTRUCTION CO. (awarded contract); (B) Capitol Electric Co.

The itemized bids were as follows:

CONSTRUCTING DAMS, POWER HOUSE AND REGULATING GATES.

	(A)	(B)
Power house and station above main floor, lump sum	$5,314.00	$3,900.00
Power house and station below main floor:		
450 cu. yds. concrete	8.00	9.00
14,000 lbs. steel reinforcing	.07	.05
100 cu. yds. excavating well	6.00	5.50
Trash racks, lump sum	350.00	300.00
Sluice gates, lump sum	200.00	125.00
Excavation:		
500 cu. yds. earth	.65	.60
500 cu. yds. gravel and boulders	.90	1.00
4,600 cu. yds. solid rock	3.00	3.75
Excavating and backfilling:		
50 cu. yds. earth	.75	1.00
50 cu. yds. gravel and boulders	1.00	1.50
100 cu. yds. solid rock	6.00	4.50
Construoting Dams:		
2,900 cu. yds. concrete	5.80	10.85
4,500 cu. yds. loose rock	3.00	2.25
500 cu. yds. gravel and earth	.90	1.10
Regulating gates, lump sum	2,800.00	3,500.00
90 lin. ft. flash boards and walk on dam	11.50	2.00
Ice fender, lump sum	650.00	50.00
100 cu. yds. rip rap	3.00	2.75
400 lin. ft. c.-i. pipe, 16-in., furnishing and laying	4.25	4.00
Totals	$63,562	$75,995

MONUMENT.—Cornfield Harbor, Md.—Bids will be received at the office of William C. Coates, Comr. for Marking Graves of Confederate Dead, War Department, 410 Lemon Bldg., Washington, D. C., until 11 a. m., July 18, for furnishing and erecting complete, including foundation, in the Confederate cemetery near the post-office of Cornfield Harbor, in the vicinity of Point Lookout, St. Mary's County, Md., a monument or marker to the Confederate prisoners of war buried therein, to be either of crystalline white marble or of white or light gray granite and to bear the name, rank (if other than private), company and regi-

*SEWERS.—Freehold, N. J.—Bids were received June 22 by the city for sewerage extensions and pumping stations. Faring, Chapman & Farquhar are the engineers, 874 Broadway, New York. The bidders were: (A) Arthur K. Hillpot, Red Bank, N. J.; (B) Edmund F. Saxton, 114 Liberty St., New York; (C) D'Amato & Steffanelli, Newark, N. J.; (D) Liddle & Pfeiffer, Perth Amboy, N. J.; (E) Denise & Buck, Freehold, N. J.; (F) Wm. John Smith and S. L. Bartholomew, Asbury Park, N. J.; (G) Martin & Miller, Roselle Park, N. J.; (H) McGovern Contracting Co., Trenton, N. J.

The itemized bids were as follows:

SEWERS AND PUMPING STATION, FREEHOLD, N. J.

	A.	B.	C.	D.	E.	F.	G.	H.
3,240 lin. ft. 8-in. vit. sewer, 6 ft. deep or less	$0.37	$0.35	$0.48	$0.50	$0.47	$0.50	$0.55	$0.50
12,890 lin. ft. 8-in. vit. sewer, 6 ft. to 8 ft. deep	.43	.50	.60	.60	.56	.60	.65	.70
1,760 lin. ft. 8-in. vit. sewer, 8 ft. to 10 ft. deep	.60	.70	.75	.65	.62	.75	.85	.90
150 lin. ft. 8-in. vit. sewer, 10 ft to 12 ft. deep	1.00	.90	.95	.70	.72	1.20	1.15	1.00
220 lin. ft. 8-in. vit. sewer, 12 ft. to 14 ft. deep	1.32	1.10	1.18	.75	1.16	1.50	1.75	1.50
310 lin. ft. 8-in. vit. sewer, 14 ft. to 16 ft. deep	1.47	1.60	1.40	.80	1.28	2.00	2.25	1.75
500 lin. ft. 3-in. underdrain in sewer trench	.10	.12	.15	.25	.07	.20	.30	.15
500 lin. ft. 4-in. underdrain in sewer trench	.12	.14	.18	.30	.07½	.25	.35	.20
200 lin. ft. 6-in. underdrain in sewer trench	.18	.16	.23	.35	.16	.30	.40	.30
700 8-in. x 5-in. Y's (over & above price on sewer)	.80	.85	.55	.75	.80	1.00	.75	1.00
490 lin. ft. 8-in. iron pipe sewer (over & above price on vit.)	1.00	1.30	.70	.90	.97	1.00	.75	1.50
3,100 lin. ft. 4-in. iron pipe force main (in sewer trench)	.62	.40	.42	.60	.57	.50	.60	1.00
340 lin. ft. 4-in. iron pipe force main (in separate trench)	.60	1.60	.63	.50	.67	.50	.6[illegible]	1.00
210 lin. ft. 6-in. vit. pipe drain	.32	.32	.50	.50	.38	.40	.50	.50
21 additional manholes, 6 ft. deep or less	38.00	25.50	33.00	25.00	41.50	45.00	39.00	35.00
37 ft. depth below 6 ft	3.50	6.00	5.00	2.00	4.80	7.00	5.00	3.00
4 drop connections at manholes	5.50	3.00	5.00	4.00	2.90	5.00	9.00	10.00
33 lamp-holes	8.00	13.00	10.00	12.00	6.10	7.00	12.00	10.00
17 flush tanks	70.00	70.00	83.00	92.00	96.00	65.00	75.00	100.00
1 Bowne Ave. pumping station	1,500.00	1,435	2,050.00	2,000.00	3,071.78	3,680.00	2,995.50	2,500.00
1 Spring St. pumping station	1 000.00	1,505.00	1,300.00	1,600.00	2,471.38	2,500.00	3,300.00	2,500.00
1 South St. pumping station	1,500.00	800.00	2,250.00	2,500.00	2,972.00	4,000.00	2,745.5[illegible]	2,500.00
10 cu. yds. rock excavation	3.00	3.10	3.00	2.00	2.85	2.50	3.00	2.00
20 cu. yds. concrete	7.50	6.00	6.00	8.00	8.00	12.00	9.00	8.00
3,000 ft. sheeting and shoring left in place	38.00	28.00	28.00	25.00	30.00	35.00	40.00	25.00
3,000 ft. foundation flooring	45.00	30.00	35.00	30.00	32.00	35.00	50.00	35.00
Totals	$18,915	$19,383	$22,584	$23,482	$25,590	$28,298	$28,6[illegible]	$29,240

U. S. POSSESSIONS.

(*Denotes *that this work is advertised in Engineering News.*)

*CANAL LOCK SUPPLIES.—Panama.—Bids will be received at the office of Capt. F. C. Boggs, Corps Engrs., U. S. A., General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10.30 a. m., Aug. 8, for fixed irons for rising stem gate valves, cylindrical valves and snubbing hooks and girders for the canal locks.

SUPPLIES.—Panama.—Bids will be received at the office of Capt. F. C. Boggs, Corps of Engrs., U. S. A., General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10.30 a. m., Aug. 5, for lumber, centrifugal pumps and fittings for same, steel castings, locomotive and truck springs, steel links for cross conveyor, non-liquid oil, cable grease, etc.

EXAMINATIONS.

ASSISTANT ENGINEER.—New York, N. Y. —Applications will be received until 4 p. m., July 27 for the position of Assistant Engineer, Bureau of Buildings, Boro. of Manhattan. The examination will be held on Aug. 24 at 10 a. m. Minimum age, 30 years. Salary, $4,000 a year. Applications may be obtained from the Municipal Civil Service Commission, 299 Broadway, New York. F. A. Spencer is Secretary.

TESTING ENGINEER.—Madison, Wis.—The U. S. Civil Service Commission announces an examination on July 27, to secure eligibles from which to make certification to fill a vacancy in the position of Engineer in Timber Tests, $1,200 a year, Forest Service, Madison, Wis., and vacancies requiring similar qualifications as they may occur, unless it shall be decided in the interest of the service to fill the vacancy by reinstatement, transfer, or promotion. Age limit, 20 years. Application form 1312. Applications must be filed prior to closing hour on July 16.

FOREST ENGINEER.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on July 27-28 to secure eligibles from which to make certification to fill a vacancy in the position of Forest Engineer, $1,800 a year, in the Forest Service, and vacancies requiring similar qualifications as they may occur, unless it shall be decided in the interest of the service to fill the vacancy by reinstatement, transfer, or promotion. Applicants must have reached their 21st birthday and not their 45th birthday on the date of the examination. Application form 1312.

DRAFTSMAN.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on July 27, to secure eligibles from which to make certification to fill a vacancy in the position of Draftsman (male), Soil Survey, Bureau of Soils, Department of Agriculture, at $1,200 a year and vacancies requiring similar qualification as they may occur, unless it shall be decided in the interest of the service to fill the vacancy by reinstatement, transfer or promotion. Competitors will not be assembled for any of the tests. Age limit, 18 years. Application form 1312. Applications must be filed prior to closing hour on July 27.

ASSISTANT IN DAIRY CHEMISTRY.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on July 27, to secure eligibles from which to make certifications to fill vacancies in the positions of Assistant qualified in dairy chemistry and dairy bacteriology in the Bureau of Animal Industry, Department of Agriculture, and vacancies requiring similar qualifications as they may occur, unless it shall be decided in the interest of the service to fill any or all of the vacancies by reinstatement, transfer, or promotion. Salary, $900 to $1,800 a year. Applicants must have reached their 20th and not their 50th birthday on date of examination. Application form 304 and special form.

STATISTICIAN.—Madison, Wis.—The U. S. Civil Service Commission announces an examination on July 27, to secure eligibles from which to make certification to fill several vacancies in the position of Statistician in Forest Products (male), at salaries ranging from $1,400 to $1,800 a year, in the Forest Service, Department of Agriculture, Madison, Wis., and similar vacancies as they may exist at different places in the Forest Service, unless it shall be decided in the interest of the service to fill the vacancies by reinstatement, transfer, or promotion. Applicants must have reached their 22d birthday, but not their 42d birthday, on the date of the examination. Application form 1312. Applications must be filed prior to closing hour on July 16.

MONOTYPE MACHINIST.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on Aug. 10, to secure eligibles from which to make certification to fill a vacancy in the position of Compositor qualified as Monotype Machinist (casterman) at $1,250 a year in the Weather Bureau, Washington, D. C., and vacancies requiring similar qualifications as they may occur, unless it shall be decided in the interest of the service to fill the vacancy by reinstatement, transfer, or promotion. As the examination held on March 30 for this position failed to secure a sufficient number of eligibles to meet the needs of the service, qualified persons are urged to enter this examination. Age limit, 20 years or over. Application forms 1800 and 1745.

TOPOGRAPHIC DRAFTSMAN. — Washington, D. C.—The U. S. Civil Service Commission announces an examination on July 27-28, to secure eligibles from which to make certification to fill a vacancy in the position of Topographic Draftsman (male), Coast and Geodetic Survey, Washington, D. C., $900 a year, and vacancies requiring similar qualifications as they may occur in any branch of the service, unless it shall be decided in the interest of the service to fill the vacancy by reinstatement, transfer or promotion. The salary of the position of topographic draftsman ranges usually from $1,000 to $1,500 a year, and for copyist topographic draftsman from $900 to $1,500 a year. Both men and women will be admitted to this examination. Age limit, 18 years or over. Application form 1312.

FIRST CLASS STEAM ENGINEER.—Cleveland, Ohio.—The U. S. Civil Service Commission announces an examination on Aug. 10 to secure eligibles from which to make certification to fill a vacancy in the position of Chief Engineer, $1,000 a year, in the U. S. Post-office, Custom-house and Court-house building at Cleveland, Ohio, and vacancies requiring similar qualifications as they may occur in the Custodian Service, unless it shall be decided in the interest of the service to fill the vacancy by reinstatement, transfer, or promotion. Applicants must have reached their eighteenth birthday and not their fifty-fifth birthday on the date of the examination. All honorably discharged United States soldiers and sailors of the war of the rebellion will be admitted to this examination without regard to the maximum age limit. Application form 1800.

ASSISTANT STEAM ENGINEER.—Cleveland, Ohio.—The U. S. Civil Service Commission announces an examination on Aug. 10 to secure eligibles from which to make certification to fill two vacancies in the position of Assistant Engineer, $1,200 a year each, in the U. S. Post-office, Custom-house and Court-house building at Cleveland, Ohio, and vacancies requiring similar qualifications as they may occur in the Custodian Service, unless it shall be decided in the interest of the service to fill either or both of the vacancies by reinstatement, transfer or promotion. Applicants must have reached their eighteenth birthday and not their fifty-fifth birthday on the date of the examination. All honorably discharged United States soldiers and sailors of the war of the rebellion will be admitted to this examination without regard to the maximum age limit. Application form 1800.

PLANT ECOLOGIST.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on July 20 to secure eligibles from which to make certification to fill two vacancies in the position of Plant Ecologist (male), in the Forest Service, Department of Agriculture, for duty at Washington, D. C., at $1,200 a year each, and vacancies requiring similar qualifications as they may occur, unless it shall be decided in the interest of the service to fill the vacancies by reinstatement, transfer, or promotion. The duties of the position are the investigation of the natural revegetation of overgrazed range lands within the national forests, and a study of the life history of forage plants in connection with grazing lands. Men only will be admitted to this examination. Applicants must have reached their 21st birthday, but not their 45th on the date of examination. Application form 1312.

SURVEYOR.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on July 20-21, to secure eligibles from which to make certification to fill vacancies as they may occur in the position of United States Surveyor in the General Land Office, and other vacanies as they may occur in any branch of the service requiring similar qualifications. The Department states that the entrance salary is $100 a month, traveling expenses, and subsistence while in the field. Promotions are made after satisfactory service. In the Southern States employment is usually continuous, but in the Northern States persons are frequently dropped during the winter months. Those who give satisfaction to the Department are furloughed when conditions require a stoppage of work, but may be re-employed the next spring immediately and without further examination. Age limit, 20 years or over. Application form 1312.

STATISTICIAN, ACCOUNTANT, ETC.—Albany, N. Y.—The State Civil Service Commission, Albany, will hold examinations on July 23 for the following positions: Accountant, Public Service Commission, $1,801 to $2,400; men only. Chief of Examination Division, Education Department, $4,000; men only; County Sealer of Weights and Measures, various counties; men only. Editor and Statistician, male or female, Education Department, $2,000. Expert, Department of Labor, $1,800; men only. Inspector of weights and measures, $750 to $1,200; men only. Junior Accountant, Public Service Commission, $1,200 to $1,500; male and female. Satisfaction Clerk, Register's Office, New York County, $3,400; open to men only, legal residents of New York County. Searcher and Examiner, Register's Office, New York County, $2,000; open to men only, legal residents of New York County. Statistician, Department of Labor, $1,200 to $1,500; men only. Statistician, Public Service Commission, $1,801 to $2,400; men only. Superintendent, State Reservation at Niagara, $2,400; men only. Supervisor of Agricultural Education, Education Department, $2,500; men only. Applications should be filed on or before noon of July 16. Competitors must be at least 21 years of age.

INDUSTRIAL NOTES.

THE DETROIT SEAMLESS STEEL TUBES CO., Detroit, Mich., announce the appointment of Mr. H. S. White as sales manager.

THE ASBESTOS PROTECTED METAL CO., Canton, Mass., recently opened an office at 100 Broadway, New York, N. Y. Mr. P. M. Stewart, formerly Building Commissioner of New York City, is in charge as Resident Manager.

A RECEIVER has been appointed by the U. S. District Court to assume the charge of the granite firm of Bowker-Torrey Co., Boston. The concern is one of the oldest granite handlers in New England, having been founded in 1848.

THE COOPER HEWITT ELECTRIC CO., New York City, has recently purchased a building at Grand and 8th Sts., Hoboken, N. J. This will be used as a factory for making the Cooper Hewitt lamps, as the company has already out-grown its facilities in New York.

THE NELSON IRON WORKS, Nelson, B. C., has taken over the business and stock of the Rossland Engineering Works, Rossland, B. C., and will succeed that company as British Columbia agents for the Sullivan Machinery Co., of Chicago.

THE OHIO ENGINEERING & CONTRACTING CO., an incorporated company, has recently established an office in Pomeroy, Ohio. Among those identified with the company are Messrs. E. C. Campbell, W. T. McCormick and Roy C. Cooper.

THE NEW YORK CENTRAL RAILROAD has ordered from the Pullman Co. five complete trains of steel cars for the Twentieth Century Limited. These new cars will weigh approximately 140,000 lbs. compared with 120,000 lbs., the weight of the wooden cars.

THE BUSINESS OF GENERAL CONTRACTING and engineering construction, formerly carried on by Wm. H. Flaherty, Hales Bar, Tenn., has been purchased by Jacobs & Davies, Inc., Mr. Flaherty having severed his connection with all work on that point on June 18th.

THE CYCLONE DRILL CO., Orrville, Ohio, reports an excellent demand for its cyclone drill for blast work. Among recent purchasers of these drills are included The Marblehead Lime Co., The Kokomo Stone Co., Mercer Stone Co., Empire Stone Co. and the Union Lime Co.

THE ENGINEERING FIRM of C. S. Young has taken additional floor space at 60 Wall St., New York City, to meet increasing business. The specialty of this concern is compiling reports regarding finances as well as devising plans, methods and the operation of public utilities and industrial companies.

THE PULSOMETER STEAM PUMP CO., 18 Battery Pl., New York City, has recently sold to the Japanese Government six pulsometer steam pumps for use on Japanese railways. The company has shipped to China a pulsometer steam pump complete, with a boiler mounted on a truck, principally for exhibition purposes.

THE PACIFIC COAST BUSINESS of the C. W. Hunt Co., New York, N. Y., builders of coal handling, conveying and hoisting machinery, will be handled by the San Francisco Bridge Co., 865 Monadnock Building, San Francisco. The company has just completed a naval coaling station in San Francisco Bay for the U. S. Government.

EXTENSIVE dock improvements are contemplated at Levis, opposite Quebec, on the St. Lawrence River, by the Canadian Government. Sir Montagu Allen in a recent interview stated that the contemplated dry dock would have a length of 1,000 ft. and an entrance 100 ft. wide, with a depth over the sill to allow the largest battleship entrance.

THE PENNSYLVANIA WIRE GLASS CO., Pennsylvania Building, Philadelphia, Pa., announces that it is the successor of the Continuous Wire Glass Co., making solid wire glass by the continuous process. The president is Walter Cox, who has been identified with this manufacture since 1893. A branch office has been established at 100 Broadway, New York, N. Y., and is in charge of E. S. Hand.

THE MINE & SMELTER SUPPLY CO., who maintain large offices and warehouses at Denver, El Paso and Mexico City, with executive offices at 42 Broadway, New York City, announces that it has taken over the agency, for the entire western territory of the United States, of the line of pumps made by the Epping-Carpenter Co., Pittsburg, and the line of compressors made by the Burry Compressor Co., Erie, Pa.

THE CRANFORD CONSTRUCTION CO. will assume the concrete piling and construction business of the Cranford Paving Co., which for the last five years has been carried on through the Western office at Pittsburg. The Cranford Construction Co. will have offices at 609 Gerke Bldg., Cincinnati, and 602 House Bldg., Pittsburg. The company makes a specialty of foundation and concrete construction.

THE LACKAWANNA STEEL CO. reports the total income for the three months ending June 30, 1910, of $2,011,002, compared with $667,323 during the corresponding months last year. For the first half of 1910 the total income was $3,427,093, compared with $926,454 during the corresponding period last year. The unfilled orders, on June 30, 1910, amounted to 379,836 gross tons, compared with 384,934 gross tons in 1909.

THE FOUNDATION CO., 115 Broadway, New York City, has recently completed the foundations for the Windsor Station of the Canadian Pacific Railroad at Montreal, Canada. The company has the foundation contract for the reconstruction of the Victoria bridge over the St. Lawrence at Montreal for the same railroad. This will be a double-track structure, resting upon nine piers, some of which will probably be pneumatic caissons.

THE FIRE LOSS in the United States and Canada, according to records compiled by the Journal of Commerce and Commercial Bulletin, New York, during the first six months of 1910 amounted to $99,288,900. This is a reduction of $4,500,000 compared with the same period last year, and approximately $26,000,000 less than the corresponding six months in 1908. In that year, however, the Chelsea conflagration in Boston was responsible for $10,500,000 of the total loss.

A PLACER DREDGE for gold mining to be shipped to Burmah, India, is now being built by the Bucyrus Co., South Milwaukee, Wis. This dredge, which is being constructed for the Mewaing Gold Co., Ltd., a subsidiary concern of the S. A. Mower Co., differs from the standard Placer machines in that it has a steel hull. The dredge will be steam driven, but this is no novelty, a number of dredges of this type being used in Alaska, although the California machines generally use electricity.

STRUCTURAL STEEL SHAPES made a new high record as far as output was concerned during 1909, according to a recent report of the American Iron & Steel Association. The total output last year was 2,275,562 gross tons, being double the output of 1908 and exceeding the previous banner year, 1906, by over 150,000 tons. These statistics include ordinary structural steel shapes, but do not include plates, girders made from plates, or bars for reinforcing purposes. The greatest production in any state was in Pennsylvania, which contributed 1,642,000 tons.

TURBINE BLOWERS of the typhoon type are in exceedingly good demand, according to a recent statement of the L. J. Wing Mfg. Co., 90 West St., New York City. This company has recently sold to the Lackawanna Railroad, for use in the company's collieries, 28 of their 20-in. blowers; the Philadelphia Rapid Transit Co. has an order in for 30 blowers of a similar type, and the Pennsylvania Railroad has recently sent a requisition through for 30. The company states that during the last year over 100 machines have been sold in states where there were formerly no blowers of this type.

THE U. S. STEEL CORPORATION will proceed at once to construct a new steel plant at Duluth. A committee of officers and engineers visited the site last week and the favorable report made to the finance committee of the corporation has been approved. Preliminary work has been under way for several months, clearing the site and making improvements to the waterways. A bridge will be built over the St. Louis River connecting the Wisconsin side to the steel plant. The ore will be brought into the plant over this bridge. The original plans call for the construction of two blast furnaces, an open hearth plant, a rail mill and a structural steel mill, as well as facilities for manufacturing some lighter lines.

THE BUCYRUS CO., South Milwaukee, Wis., announces that it has acquired the exclusive rights to manufacture and sell the Heyworth-Newman drag-line excavators, and has taken over this business, which has been conducted by James O. Heyworth, of Chicago. These excavators, which have been described in Engineering News, are in use on the North Shore branch of the Chicago Drainage Canal, the New York State Barge Canal, and the Cape Cod Canal. They are considered specially adapted for economical work on canals, irrigation and drainage ditches, and some classes of railway work. The bucket is so designed as to make a deep cut (instead of scraping the surface) and to clear itself when handling sticky material. It is claimed that the machine can dig practically any material which a steam shovel can handle.

ANOTHER PENSION plan has been announced to be made effective July 1. This is by the Minneapolis, St. Paul & Sault Ste. Marie Railway Co., and according to announcement made by Wm. H. Schutt, Assistant to the General Manager, an employee to be eligible to a pension must have served the company for fifteen consecutive years. The age limit is 65 years, but if a man is incapacitated before he has reached that age and has been in the service of the company 15 years, he is eligible to receive a pension. Officials elected by the Board of Directors are not eligible unless incapacitated. The amount of a pension will vary with the length of service, being 1% of the average wage received the last ten years of service for each year of service. In other words, an employee who has been in the service of the company 25 years, will receive a pension amounting to 25% of the average pay during the last 10 years of service.

BALATA BELTING WILL in the near future be made in the United States. The use of belting of this kind has increased tremendously in the last five years, and the proprietors of the patents and secrets of its manufacture believe that a wider market can be secured by erecting a factory in this country and avoiding the high tariffs. The company is building, in the suburbs of Easton, Pa., a new plant where this belting will be made. Indentified with the scheme are the officers of the New York Leather Belting Co., 51 Beekman St., New York. Chas. E. Aaron will be president of the new company, and John R. Stein, treasurer. The German interest of the new company will be represented by Edwin Vollrath, formerly of Blankenburg, Germany, who will be Secretary of the new company. This belting is composed of cotton duck and a substance known as Balata gum, a product of South America. Not only is the process of belt-making a secret, but the weaving of the duck for belting is also a secret process and no visitors are ever allowed to visit the plant where it is made.

STREET AND INTERURBAN RAILWAYS according to a recent census bulletin, increased 53.5% in the mileage of first or main track between 1902 and 1907. The total length of first track in 1907 was 25,547.19 miles.

The total number of miles of track, meaning the total length of all trackage, including sidings, was 34,403.56 in 1907, as against 22,576.99 in 1902, the per cent. of increase amounting to 52.4. Of the total number of miles of track, those operated by electricity in 1907 numbered 34,059.69 and in 1902 21,907.59. The per cent. of increase was 55.5. The trackage operated by animal power in 1907 was 136.11 and in 1902 259.10. The per cent. of decrease amounted to 47.5. The trackage operated by cable in 1907, was 61.71 and in 1902 240.69, the per cent. of decrease being 74.4. The trackage operated by steam in 1907 was 146.05 and in 1902 169.61, a decrease of 13.9 per cent.

The percentage of total trackage operated by electric current increased from 15.5 in 1890 to 99 in 1907. Animal power was the most important in 1890, being in use on 69.7 per cent. of the total trackage. By 1907, however, the proportion of trackage operated

by animal power had decreased to fourtenths of 1%.

The total number of cars in use in 1907 was 83,641, as against 66,784 in 1902, an increase of 25.2%. The number of passenger cars in 1907 was 70,016, as compared with 60,290 in 1902. The per cent. of increase was 16.1, this low rate of increase being due to the fact that the use of electricity has made it possible to increase the size of the passenger cars.

The total number of passengers in 1907 was 9,533,080,766, as against 5,836,615,296 in 1902, an increase of 63.3%.

The steam and gas engines and water wheels used in generating the electricity were reported as having 2,476,479 HP. in 1907, as compared with 1,349,211 in 1902, an increase of 1,127,268 HP., or 83.6%.

The kilowatt capacity of dynamos in 1907 was 1,723,416 and in 1902, 898,362, an increase of 91.8%.

THE CANADIAN LUMBER cut for 1909 has been computed by the Canadian Interior Department by means of correspondence with over 1,400 lumber companies in all parts of the Dominion. While the list is by no means complete it represents the greater part of the timber cut. The figures are as follows:

CONCRETE POSTS.—Ideal Concrete Machinery Co., South Bend, Ind. Paper; 9 × 12 ins.; pp. 4; illustrated.

The Ideal concrete fence post is of T section, but with all angles rounded, and has a cylindrical base or foot to serve as an anchor. The reinforcing wires are held taut in the mold. The fence wires may be secured to staples embedded in the concrete or fastened by wire loops passed around the post.

OVERHEAD EQUIPMENT FOR ELECTRIC RAILWAYS.—Indianapolis Brass Co., Indianapolis, Ind. Cloth; 4¼ × 6¼ ins.; pp. 47; illustrated.

Trolley wire ears and splices, overhead frogs and switches for high-speed line, and similar appliances occupy the first part of the pamphlet, prices being given in each case. There are also tables of the weight and electrical properties of wire, the weight of steel and wooden poles, and specifications for cedar poles.

Province.	Lumber cut ft.	Average value per 1,000 ft.	Value.
Ontario	1,294,794,000	$18.84	$24,399,077
Quebec	690,135,000	15.70	10,838,608
British Columbia	647,977,000	14.05	9,107,186
New Brunswick	308,400,000	13.23	4,081,402
Nova Scotia	216,875,000	13.25	2,973,730
Saskatchewan	91,166,000	17.29	1,576,820
Manitoba	56,477,000	15.38	867,969
Alberta	42,382,000	13.99	593,244
Total	3,348,206,000	.....	$54,438,036

The number of railroad ties cut during 1909 was 13,978,416, valued at $5,281,685; shingles, 1,499,396,000, valued at $3,101,996, and lath 671,562,000, having a value of $1,487,125. The aggregate value of the total production of lumber of all kinds for 1909 is placed at $67,500,000.

TRADE PUBLICATIONS.

STEEL MINE TIMBERS.—Carnegie Steel Co., Pittsburg, Pa. Paper; 5 × 7½ ins.; pp. 58.

This contains data and tables for the use of mining engineers, largely dealing with the steel mine timbers manufactured by the Carnegie Steel Co. It is the third edition of the book.

REINFORCED CONCRETE.—Vulcanite Portland Cement Co., New York City. Vulcanite pamphlet No. 8. Paper; 6 × 9 ins.; pp. 26; illustrated.

This is a reprint of Vol. 4, No. 5, of "The Concrete Review," and is the address of Mr. Benjamin A. Howes, on "Reinforced Concrete for Houses," delivered before the Association of American Portland Cement Manufacturers.

WOOD PRESERVATIVE.—Barrett Mfg. Co., New York City. Paper; 7 × 8 ins.; pp. 24; illustrated.

The compound manufactured by this company for the preservation of wood is known as "Creo-Carbolin." It is a coal-tar product—one of the numerous by-products manufactured by this company. The various methods by which the compound may be applied to the wood are described in this catalog.

PAINTING STRUCTURAL STEEL.—National Lead Co., 111 Broadway, New York City. Pamphlet 4½ × 8 ins.; pp. 42.

This pamphlet is devoted to the use of lead in oil for painting, giving much information regarding red lead and oil. In the appendix of the book are given twelve formulas regarding the mixing and applying of the paint to structural steel.

GAS PRODUCER PLANTS.—Backus Water Motor Co., Newark, N. J. Paper; 9 × 6 ins.; pp. 16; illustrated.

The design of producer gas power plants of capacities varying from 10 to 150 HP. are shown in this pamphlet. The catalog also shows comparative operating costs, dimensions, weights, etc., of the suction producers and the gas engines.

SIGNALS OF ELECTRIC INTERURBAN RAILWAYS.—Stromberg-Carlson Telephone Mfg. Co., Chicago. Paper; 6½ × 8¼ ins.; pp. 12; illustrated.

These signals are to enable a train dispatcher to notify train crews to stop and call up the dispatcher for orders. They are for use in connection with the telephone dispatching system now generally adopted by interurban railways.

ASPHALT COATING AND WATERPROOFING MATERIALS.—The American Asphaltum & Rubber Co., Chicago, Ill. Paper; 3½ × 6½ ins.; pp. 26; illustrated.

Considerable interesting information regarding the use of "Pioneer" mineral rubber pipe coating for preserving steel pipe and steel bands for wood-stave pipe, and for lining reservoirs for water-tightness, is given in this little pamphlet. A number of halftones are shown. Brief specifications for coating steel pipe and for reservoir waterproofing are included.

TRACTION ENGINES.—Port Huron Engine & Thresher Co., Port Huron, Mich. Paper; 12 × 9 ins.; pp. 80; illustrated.

In this catalog will be found a description of various pieces of machinery for threshing. The parts of interest to engineers are descriptive of a line of traction engines. The specifications of the different parts are all shown, together with much matter on the mechanical design and construction, on the performance, etc.

CONCRETE FENCE POSTS.—McElroy Post & Pole Co., 41 Sixteenth Ave., W., Cedar Rapids, Iowa. Paper; 3½ × 8½ ins.; pp. 4; (also separate circulars); illustrated.

These posts are of T-section for line posts and X-section for corner and brace posts, with a reinforcing unit composed of three bars connected by wire ties. The fencewire fastenings are bent wires having one leg embedded in the post while the projecting leg can be twisted around the fence wire.

ELECTRIC FANS.—The Sprague Electric Co., 531 West 34th St., New York City. Catalog 321. Paper; 8 × 10½ ins.; pp. 36; illustrated.

A line of small fans for house and office use as designed for the season of 1910 is described in this artistic pamphlet. All types are represented, such as those with pedestals for desks, brackets for the wall, pendants for the ceiling, etc. The catalog gives dimensions and prices of parts.

CROSSING SIGNALS FOR ELECTRIC RAILWAYS.—National Electrical Mfg. Co., Elgin, Ill. Paper; 4 × 9 ins.; pp. 8; illustrated.

The National crossing signal has lamps and a gong mounted on the post of the warning sign, so that it is effective both by night and by day. The pamphlet describes the construction and the electrical connections for both single-track and double-track service.

ROTARY VALVE.—John Simmons Co., 102-110 Centre St., New York, N. Y. Paper; 3½ × 6 ins.; pp. 16; illustrated.

The Rothchild rotary valve, described in this booklet, while designed as a blow-off valve, is equally adapted for water, ammonia, gas, air and oil under high pressure. It is a radical departure from the ordinary valve in that the gate rotates; provision being made to automatically compensate for any wear that may occur.

GRAPHITE.—The United States Graphite Co., Saginaw, Mich. Paper; 7 × 10 ins.; illustrated.

Two bulletins are at hand from this company; one describing graphite mining in Mexico, and the other giving interesting facts about graphite paints.

The first-named bulletin in its 24 pages presents extracts from a report by Mr. F. L. Hess, Geologist, U. S. Geological Survey. These extracts are reprinted from the "Engineering Magazine" of October, 1909.

The second bulletin has 64 pages and discusses the forms of graphite and the adaptability of Mexican graphite as a pigment. Further along in the book, the protection, color and covering power of this concern's graphite paints are discussed. Throughout the book are inserted half tones showing steel work to which this paint has been applied.

BATTERY CHARGING RHEOSTATS.—The Cutter-Hammer Co., Milwaukee, Wis. Paper; 4¼ × 7 ins.; pp. 48; illustrated.

These rheostats are designed to meet all ordinary requirements and are suitable for most classes of automobile charging and storage battery service, but special apparatus will be designed and built to meet unusual conditions. The various designs and devices are described and there is a table of electrical information and list prices.

AIR COMPRESSORS.—The American Well Works, Aurora, Ill. Paper; 7¾ × 10½ ins.; pp., 80; illustrated.

A number of types of large and small compressors are described, and there is a brief discussion of the results of compound or multiple-stage compression, illustrated by diagrams. One of the special machines is a compressor designed with a view to transportation by mules in mountain districts, and in this the heaviest part weighs less than 200 lbs. Other specialties are a portable engine-driven plant (for contractors' use) and an air-lift pumping system.

WOOD PRESERVATIVE.—Berlin Mills Co., Portland, Me. Paper; 6 x 9 ins.; pp. 25; illustrated.

Under the title "The Selection of Structural Wood and Its Preservation from Decay," this little catalog outlines the necessity for correct selection of the wood and also for the proper preserving treatment of it after it has been selected, together with the various processes which have been used in its preservation. The method recommended by the company is that known as Kyanizing, a form of using corrosive sublimate to impregnate the wood.

ARMORED HOSE.—The Sprague Electric Co., 531 West 34th St., New York City. Bulletin 516. Paper; 4 × 9 ins.; pp. 28; illustrated.

This leaflet describes a rubber hose having an interlocking flexible-steel armor for mechanical protection. Since this type of armored hose was first brought out, the armor has been slightly modified in design, so that greater flexibility has been secured with decreased weight. The catalog shows innumerable applications of the hose for air and water service on construction work and in mining.

ELECTRIC HOISTS.—The Sprague Electric Co., 531 West 34th St., New York City. Bulletin 233. Paper; 4 × 9 ins.; pp. 24; illustrated.

The small power hoists described in this pamphlet are intended to be used in handling loads, which, on account of their location, are inaccessible to the ordinary traveling crane and which are too small to be economically handled by these larger machines. Most of the types shown here are designed to run suspended from the lower flanges of a steel I-beam. The capacities vary from ½-ton load upward.

GAS ENGINES.—The Turner-Fricke Mfg. Co., Farmers Bank Bldg., Pittsburg, Pa. Paper; 9 × 7 ins.; pp. 26; illustrated.

A line of vertical gas and gasoline engines in double and triple-cylinder types is shown in this catalog. The capacities vary from 25 to 325 HP. The illustrations in the catalog show the assembled machines and also the construction of the central parts before assembly.

The principal features of the design, such as the governor, mixing valve, lubricating system, starting device, ignition system, valves, pistons, etc., are described in detail.

CONCRETE MIXERS.—Chicago Concrete Machinery Co., Chicago, Ill. Paper; 6 × 9 ins.; pp. 36; illustrated.

The Chicago mixer is of the drum type, having a cylindrical drum fitted with deflecting planes and lifting blades to mix the materials. Stationary and portable outfits are shown, operated steam or gasoline engines or electric motors. Some of these outfits are fitted with a cable-operated charging skip, and some have also a friction hoist. Several portable outfits are used in the track reconstruction of the Chicago street railways.

ARTISTIC BRICK WORK.—Thomas Moulding Co., Chicago. Paper; 4 × 6¼ ins.; pp. 16; illustrated.

This atractive little pamphlet sets forth the advantages of securing patterns and designs in structural and decorative brick work by the use of brick of various tints and colors, with rough surface, and laid in various styles of bond. The coloring of the mortar joints also may be utilized in affecting the finished appearance. The varied colors of the bricks are obtained by the mixture of different clays and by the methods of burning, no artificial coloring matter being used. The illustrations are mainly sketches to decorate the pamphlet rather than to supplement its descriptive matter.

LIFTING JACKS.—The Joyce-Cridland Co., Dayton, O. Catalog A. Paper; 4 × 9¼ ins.; pp. 96; illustrated.

This catalog shows a complete line of jacks for all purposes and contains discussions of the several constructions and the recent improvements in this line of jacks. It also discusses the relative merits of various types, such as hydraulic, lever, automatic, automatic geared, screw, telescoping, etc., and shows which jacks should be recommended as most suitable for different classes of service. The dimensions, weights, prices, etc., are all given and the catalog seems very complete.

RAILWAY SIGNALS.—General Railway Signal Co., Rochester, N. Y. Paper; 6 × 9 ins.; pp., 35; illustrated.

The pamphlet relates to the company's "Model 2, Form A" self-contained power-operated semaphone signal, which is operated by mechanism clamped upon the pole or base, and can use either direct or alternating current. The signal has advantages where block signaling is to be carried through existing interlocking plants. The mechanism is of such small size that it is adapted also for crossing signals and other purposes. The details are illustrated and there are diagrams of the signal circuits.

REINFORCED CONCRETE PIPE.—Reinforced Concrete Pipe Co., Jackson, Mich. Paper; 9 × 12 ins.; pp. 76.

This company manufactures an improved joint reinforced-concrete pipe for use in sewers, water conduits, etc., and illustrates in its main catalog, noted above, a number of such constructions all over the country.

In connection with this catalog, there are also two pamphlets: one containing standard "Specifications for the Manufacture of Wire and Steel Reinforced Concrete Pipe with Interlocking Joint," and another giving a log of an official test made on one of the company's 24-in. reinforced-concrete pipe.

ELECTRIC LOCOMOTIVES AND TRUCKS.—The Atlas Car & Mfg. Co., Cleveland, Ohio. Bulletin 1090. Paper; 9½ × 6 ins.; pp. 52; illustrated.

This catalog shows the design, installation and operation of a line of freight, mining and shop locomotives and trucks. These are made for use with storage batteries alone, for a combination of storage battery and third rail or overhead trolley, and for the trolley or rail alone. These locomotives are made in all the sizes and capacities which one would expect in these types. The catalog shows many installations of these various types and gives performance data.

VENTILATING FANS.—American Blower Co., Detroit, Mich. Paper; 4½ × 6 ins.; pp. 30; illustrated.

In this pamphlet a small type of "Sirocco" blower is shown as designed to be used with a miniature electric motor for ventilating dwellings and office rooms, kitchens, laundries, etc. As arranged, the blower and motor are attached to proper ducts in a frame which fits the window seat when the window is raised a few inches. These are designed to supply 5,000 cu. ft. of fresh filtered air per hour, diffusing the supply throughout the room by means of vanes on the discharge duct.

GAS ENGINES.—Bogart Gas Power Engineering Co., 1116 Chamber of Commerce, Buffalo, N. Y. Bulletins "S" and "T." Paper; 8½ × 11 ins.; pp. 8 each; illustrated.

Bulletin "S" describes a line of single-cylinder, stationary, horizontal gas engines, of 20 to 100 HP., for small power and lighting plants, using illuminating, natural or producer gas or gasoline. The general features of the design are given.

Bulletin "T" describes a line of horizontal single and double tandem gas engines of 50 to 100 HP. The designs shown resemble somewhat the designs presented in Bulletin "S" with the necessary changes expected in expanding to the larger powers.

ELECTRIC RAILWAY AND MINE HAULAGE MATERIAL.—The Ohio Brass Co., Mansfield, O. Paper; 6 × 9 ins.; pp. 297; illustrated.

This is a comprehensive catalogue and price list of the innumerable appliances and specialties used for electric traction equipment. Trolley wire brackets, hangers, insulators, switches and attachments, lightning arresters, and other line work occupy about 175 pages. Rail bonds and bonding devices, and third-rail insulators cover about 50 pages. About the same space is devoted to car equipment devices, including track sanders and brushes, couplers and drawbars, headlights and marker lamps. The remaining pages are devoted to tables of weight and strength of wire, power required for electric traction, the copper equivalent of steel rails, sag of wires, etc.

DERAILING SWITCHES AND ELECTRICALLY-OPERATED TRACK SWITCHES—Porter Railway Switch Co., Detroit, Mich. Paper; two pamphlets; 5½ × 8 ins.; pp. 12, and 3¾ × 5¼ ins.; pp. 18; both illustrated.

The larger pamphlet describes a derailing switch for use in electric railway tracks at railway grade crossings; the switch is normally set as a derail and must be set to clear the main track by means of a lever near the crossing, this being operated by the conductor. The smaller pamphlet relates to an electric switch-operating device for use in street railway tracks; it is of the solenoid type, and operated by current from the trolley wire.

CONDENSERS.—The Allis-Chalmers Co., Milwaukee, Wis. Paper; two pamphlets; 8 × 10½ ins.; pp. 12 and 16; illustrated.

Barometric condensers are the subject of the 12-page pamphlet, while the other is devoted to a type of jet condenser which is said to be the only one with which vacuum can be primed or recovered with full load on engine or turbine without stop valve in the main exhaust pipe or auxiliary forced injection. This latter condenser is very economical of floor space with steam turbines, as it has all the apparatus placed beneath the turbine and between the foundation columns. Both of the pamphlets are illustrated by sectional drawings.

BLOWERS.—L. J. Wing Mfg. Co., 90 West St., New York City. Bulletin No. 7; 6 × 9 ins.; pp. 20; illustrated.

This blower is of the propeller type, the blades being helicoids of revolution. The power is furnished by means of a steam turbine, the vanes being mounted on a periphery of the blower. This blower has been used advantageously for supplying forced draft to furnaces and mine ventilation. Several illustrations are given showing the application of blowers of this type to furnaces. The company also makes an automatic damper regulator, which increases or diminishes the supply of steam to the turbine, as desired.

PRESERVATIVE COATING FOR STEEL BANDS FOR WOOD STAVE PIPE.—The American Asphaltum & Rubber Co., 600-614 Harvester Bldg., Chicago, Ill. Folder; illustrated.

Mr. Shirley Baker, Am. Soc. C. E., Manager Pipe Department, Redwood Manufacturers' Co., has prepared a little essay, here published, on wood stave pipe and the fact that the life limit of such pipe depends upon the preservation of the steel bands which hold it together. He states in conclusion that he has used "Pioneer" mineral rubber pipe coating both as a hot dip for coating the bands and as a field paint for retouching the abraded spots, and that he unhesitatingly recommends this preservative coating.

CRUCIBLE FURNACE.—Rockwell Furnace Co., 26 Cortlandt St., New York City. Bulletin M. Paper; 9 × 11 ins.; pp. 4; illustrated.

This folder shows a line of tilting crucible furnace, using oil or gas fuel for melting aluminum, brass, copper, cobalt, gold, iron, manganese, silver, vanadium, etc.

The furnace is so constructed, with a combusion chamber in the rear, that the flame from the burner projects downward against the bottom of the chamber, and not against the crucible. The design is such that should the crucible break during the heat, the metal is all retained in the furnace and will not spill on the floor. The heat may be continued as though the crucible had not been broken, and the metal can be poured as with an open-flame furnace of this type.

This particular furnace is made in four sizes, varying in working capacity from 200 to 1,100 lbs. The drawings show the construction outlined above.

DIRECT-CURRENT GENERATORS.—Crocker-Wheeler Co., Ampere, N. J. Bulletins 119, 121, 124. Paper; 7½ × 10 ins.; illustrated.

The mechanical construction and electrical design of a line of direct-current generators for lighting and power service are described and pictured in the first bulletin. The dimensions of the line of machines described show that the capacities vary from 200 to 1,200 KW., and that they are made for a wide variety of prime movers.

The second bulletin describes a somewhat similar line of generators, designed for services where a smaller size is desirable. These machines run in capacity from 25 to 250 KW. This bulletin, also, describes the mechanical construction and the electrical design in a general way.

The third bulletin in its four pages describes a standard type of exhaust fan when driven by an enclosed motor. The outfit is designed to be inserted in a partition wall.

RECORDING THERMOMETER.—The Bristol Co., Waterbury, Conn. Bulletins 124 and 125. Paper; 8 × 10½ ins.; pp. 4 and 12; illustrated.

The first of these bulletins describes Bristol's familiar recording thermometers for recording the temperature at the point where the instrument is located. These are used outdoors or for interiors like in cold-storage plants. The second bulletin shows similar thermometers where it is desired to have the recording apparatus at some distance from the point where the temperature is being measured. This has been particularly developed for use in conservatories, clubs, private residences and in all places where ordinary temperatures are to be measured without having the recorder exposed to injurious influences.

WATER METERS.—Pittsburg Meter Co., East Pittsburg, Pa. Paper; 3½ × 6 ins.; pp. 9.

Aside from the name of the company and cut of the Keystone water meter, this pamphlet contains no advertising matter whatever. What it does give is the population, number of taps, meters, percentage of taps metered and average per capita consumption per day for 312 cities. Cities are classified in population groups, and averages are given for each group. These averages contrast the consumption in cities having under 25% and over 75% of their taps metered. We hardly need add that the net result of the tabulation is to show how the use of meters keeps down the consumption to a figure which relatively is very low indeed.

HOT-BLAST RADIATORS.—American Radiator Co., Chicago. Paper; 7¾ × 10¼ ins.; pp. 20; illustrated.

The tabulated results of tests of the heating efficiency of Vento cast-iron hot-blast heaters occupy almost the whole of this pamphlet, showing the heating and condensing effect of these radiators under varying conditions and using hot water as well as both 5-lb. and 30-lb. steam pressures. The radiator sections are flat, with numerous hollow projections to increase the heating surface. There is no description of the tests or any summary or analysis of the results. The pamphlet is intended especially for heating and ventilating engineers and contractors who install blast-heating apparatus in connection with blower systems.

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Plans and Specifications on File.

The following plans (P.) and Specifications (S.) are on file (for reference only unless otherwise noted) at the office of The Engineering News Publishing Co., 220 Broadway, New York.

7-15*	Ditches, Helena, Ark	(S.)	6-30
7-16	Generator set, etc., Charleston, S. C	(S)	6-30
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7-22*	Pumping plant, Carrollton, Ill.	(S.)	6-30
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7-25*	Dams, canal, Porto Rico	(P. & S.)	5-12
7-28*	Pumping engine, Perry, N. Y.	(S)	7-14
7-30	Condensers, etc., New York	(S)	7-14

CONDENSERS.—Wheeler Condenser & Engineering Co., Carteret, N. J. Bulletin 106. Paper; 8 × 10½ ins.; pp. 18; illustrated.

The high-vacuum surface condensers for steam turbines manufactured by this concern are herein described. The bulletin discusses the conditions which increase the efficiency of condenser surface and shows the means employed in this design for avoiding flooding of the condenser surfaces. This is accomplished by modifications of the usual steam path, by increasing the baffles, rain plates, etc., between the banks of tubes to drain off the hot water of condensation at successive levels without its coming in contact with the lower tubes. The design of pumps to accompany these high-vacuum condensers is briefly touched upon. The last few pages of the bulletin show the properties of saturated steam, as compiled by Prof. Peabody.

FOUNDRY HEATING SYSTEMS.—Green Fuel Economizer Co., Mattewan, N. Y. Paper; 6 × 9 ins.; pp. 11; illustrated.

This contains detailed descriptions, reprinted from the "Iron Age," of two novel installations recently put in by the Green Company. In one of these a foundry of 515,000 cu. ft. capacity and having walls made up entirely of glass was successfully heated by a small four-section "Positivflo" heater. The pamphlet also describes a novel arrangement of ducts whereby the heat is supplied just where needed by the workmen, at the same time furnishing them with fresh air and forcing the smoke and gases out of the building through the sky-light. By using the right number of heater sections, and regulating the volume of air delivered, it is possible to maintain the foundry at such a temperature that cores and molds will be prevented from freezing, no matter how severe the weather conditions.

EARTH-HANDLING AND ROAD-MAKING MACHINERY.—The Austin Mfg. Co., Manhattan Building, Chicago. Paper; 9 × 6¼ ins.; pp. 112; illustrated.

The New Era grading machine and its work occupy the first 45 pages, and numerous illustrations show the machine in use (hauled by horses or traction engines) on railway, road, canal and other work. Grading plows, wheeled and drag scrapers and the Austin dump and stone-spreading wagons are included, and several pages are devoted to the American gasoline road roller, which is made in sizes of 7 to 15 tons. Stone crushers, screens and elevators come next, including portable outfits, and different styles of the Austin road machines are shown. Horse rollers, sprinkling carts and street sweepers conclude the long list of varied machinery, while the last pages are devoted to a combined mower and roller operated by a gasoline engine and designed for use at golf links and country places.

For other Proposal Advertisements see pages 51, 52, 53, 54, 56 of Advertisements and Construction News page 16.

PAVING.

Antigo, Wis.

Notice is hereby given that sealed bids will be received by the undersigned City Clerk up to 2:00 o'clock P. M. of the 6th day of August, 1910, for furnishing material and doing all work necessary for paving four city blocks with Macadam Pavement. Plans and specifications are now on file in City Clerk's office.

A certified check of 5 per cent. must accompany each bid. The city reserves the right to accept or reject any or all bids.

G. O. PALMITER,
City Clerk.

Dated at Antigo, Wis., this 7th day of July, 1910.

ASSISTANT ENGINEER.

299 Broadway, New York, N. Y.
July 12, 1910.

PUBLIC NOTICE IS HEREBY GIVEN that applications will be received from Wednesday, July 13th, 1910, until 4 P. M., Wednesday, July 27th, 1910, for the position of Assistant Engineer, Bureau of Buildings, Manhattan. The examination will be held on Wednesday, August 24th, 1910, at 10 A. M. The subjects and weights of the examination are: Technical, 5; Experience, 3; Mathematics, 1; Report, 1; 75% is required on the Technical and 70% on all.

Candidates should be familiar with the best modern practice of all structural details of important building construction and have a knowledge of the fundamental requirements of the Building Law. They should have had experience in the executive control of a number of technical employes and general business relations with non-technical men. There is one vacancy. Minimum age, 30 years. Salary, $4,000 per annum.

F. A. SPENCER,
Secretary.

WATER-PIPE.

Amherst, Ohio.

Sealed proposals will be received by the Secretary, Amherst Water Works Company, until 2 P. M. o'clock, Monday, July 25th, for the construction of about thirteen miles of water pipe, varying in size from 10" to 4". Each bid must be accompanied by certified check on approved bank for $5,000.00, payable to the Secretary. The company reserves the right to reject any and all bids and to accept any bid it sees fit. Plans and specifications are on file with the Secretary at Amherst, Ohio, and in the office of the AETNA ENGINEERING BUREAU, 125 La Salle Street, Chicago. Surety bond in amount of 50% of contract will be required.

JACOB BAUS,
Secretary.

U. S. ENGINEER OFFICE, Wilmington, Del., July 8, 1910.—Sealed proposals for removal of wreck of steamship "Oakdene," lying sunk in Atlantic Ocean off coast of Virginia, will be received here until 11 A. M., July 25, 1910, and then publicly opened. Information on application. R. R. RAYMOND, Major, Engrs.

U. S. ENGINEER OFFICE, Chicago, Ill., July 7, 1910.—Sealed proposals for dredging and rock excavation in Chicago River, Ill., will be received here until 10 A. M., August 8, 1910, and then publicly opened. Information on application. THOS. H. REES, Major, Engineers.

U. S. ENGINEER OFFICE, Jones Building, Detroit, Mich., July 11, 1910.—Sealed proposals for hire of dredging plant for Detroit River will be received at this office until 3 P. M. August 11, 1910, and then publicly opened. Information on application. C. M. TOWNSEND. Colonel, Engineers.

Situations Open

WORKING FOREMAN WANTED—Capable of taking full charge concrete dam construction; give experience, age and references. Address "C. B. 2," Engineering News, New York. 2-1t

WANTED—Surveyor and engineer with experience on suburban property. Address CONSTRUCTION CO., 13 Astor Place, Room 8, N. Y. City. 2-2t

WANTED—Superintendent of construction on reinforced concrete and water pipe laying near N. Y. City. Address "B. 2," Engineering News, New York. 2-1t

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